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**TITLE 327 WATER POLLUTION CONTROL BOARD**

**Proposed Rule**  
LSA Document #09-615

**DIGEST**

Adds [327 IAC 19](#) concerning confined feeding operations. Repeals [327 IAC 16](#). Effective 30 days after filing with the Publisher.

**HISTORY**

First Notice of Comment Period: August 19, 2009, Indiana Register (DIN: [20090819-IR-327090615FNA](#)).

Second Notice of Comment Period: August 11, 2010, Indiana Register (DIN: [20100811-IR-327090615SNA](#)).

Notice of Public Hearing: August 11, 2010, Indiana Register (DIN: [20100811-IR-327090615PHA](#)).

Change in Notice of Public Hearing: October 20, 2010, Indiana Register (DIN: [20101020-IR-327090615CHA](#)).

Change in Notice of Public Hearing: April 20, 2011, Indiana Register (DIN: [20110420-IR-327090615CHA](#)).

Date of First Hearing: May 11, 2011.

**PUBLIC COMMENTS UNDER [IC 13-14-9-4.5](#)**

[IC 13-14-9-4.5](#) states that a board may not adopt a rule under [IC 13-14-9](#) that is substantively different from the draft rule published under [IC 13-14-9-4](#), until the board has conducted a third comment period that is at least 21 days long.

**REQUEST FOR PUBLIC COMMENTS**

This proposed (preliminarily adopted) rule is substantively different from the draft rule published on August 11, 2010, at DIN: [20100811-IR-327090615SNA](#). The Indiana Department of Environmental Management (IDEM) is requesting comment on the entire proposed (preliminarily adopted) rule.

The proposed rule contains numerous changes from the draft rule that make the proposed rule so substantively different from the draft rule that public comment on the entire proposed rule is advisable. This notice requests the submission of comments on the entire proposed rule, including suggestions for specific amendments. These comments and the department's responses thereto will be presented to the board for its consideration at final adoption under [IC 13-14-9-6](#). Mailed comments should be addressed to:

LSA Doc. #09-615 (Confined Feeding Operations)

Janet Pittman

Rules Development Branch

Office of Legal Counsel

Indiana Department of Environmental Management

100 North Senate Avenue

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Indianapolis, IN 46204-2251

Hand delivered comments will be accepted by the receptionist on duty at the thirteenth floor reception desk, Office of Legal Counsel, 100 North Senate Avenue, Indianapolis, Indiana.

Comments may also be submitted by facsimile at the IDEM fax number: (317) 232-5970, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules Development Branch at (317) 232-8922 or (317) 233-8903.

**COMMENT PERIOD DEADLINE**

Comments must be postmarked, faxed, or hand-delivered by September 2, 2011.

Additional information regarding this action may be obtained from Steve Mojonier, Rules Development Branch, Office of Legal Counsel, (317) 233-1655 or (800) 451-6027 (in Indiana).

**SUMMARY/RESPONSE TO COMMENTS FROM THE SECOND COMMENT PERIOD**

IDEM requested public comment from August 11, 2010, through September 24, 2010, on draft rule language as well as comments on the potential fiscal impacts of the rule. IDEM received comments from the following parties by the comment period deadline:

Hoosier Environmental Council (HEC)

Conservation Law Center (CLC)

The Sierra Club (SC)

Citizens Action Coalition of Indiana (CAC)

Todd J. Applegate, Brad C. Joern, Kenneth Foster, Stephen Hawkins, Albert Heber, Ronald P. Lemanger,

Tamilee Nennich, Nicole Olynk, Brian Richert, Michael M. Schutz, Alan Sutton - Purdue University (PU)  
Livestock and Poultry Rule Revision Group (LPRRG)  
Michael A. Veenhuizen (MV)  
Kathy J. Martin (KJM)  
Michael J. McCloskey, DVM, Fair Oaks Dairy Farms, LLC (MJMcC)  
Scott D. Severson, Earth Wise, Inc. (SDS)  
Dirk Eggleston, T & M Limited Partnership (T & M)  
Tom and Melanie Caldwell, Greenmeadow Farms, Inc. (TMC)  
Barbara Sha Cox (BSC)  
Fred Davis (FD)  
Malcomb S. DeKryger (MSD)  
Environmentally Concerned Citizens of Randolph County (ECCRC)  
Jim and Jean Hagler (JJH)  
Allen and Judy Hutchison (AJH)  
Erie Lockhart, Lockhart Farms (EL)  
Melanie Love (ML)  
Kathryn Petry (KP)

#### **Guidance Documents**

*Comment:* We anticipate that guidance will be needed for manure sampling and analysis, for determining nitrogen availability, for soil sampling, analysis and interpretation, as well as for inspection and recordkeeping. We are opposed to final adoption of this rule occurring before the development of needed guidance. (LPRRG)

*Response:* References to leading publications ranging from Purdue University publications to NRCS standards have been added to the rule for certain testing requirements and application rates, which should help clarify how CFOs should implement the requirements. However, IDEM will be working to update current guidance documents and will continue to evaluate the need to provide additional guidance as the rule progresses through the rulemaking process.

#### **Fiscal Impact**

*Comment:* To date only approximately 200 CAFO operations have made the transition to applying manure based on the phosphorus needs of the expected crops, whereas nearly 425 CAFO and all CFO operations have remained on the nitrogen-based system (estimates per IDEM staff in August-2010). Changes in manure application from a nitrogen to phosphorus basis will increase the acreage needed by 2 to 3 times, and thereby create a tremendous financial burden on producers who will either need to acquire additional land, bear the cost of manure transport and application to land not under control of the operation, or reduce the animal units on their operations to less than the permitted numbers (which may render them economically unviable). (PU) (LPRRG)

*Response:* IDEM estimates noted above reflect the number of farms required under the current state rules to have already adjusted to phosphorous-based land application practices, not the number of farms which have actually already done so. For operations not marketing their manure, or operations that have not adjusted to a phosphorous-base land application system, IDEM understands that such a switch is not without difficulty. However, CAFOs have been aware of this possible requirement as it was originally incorporated into the 2004 NPDES CAFO rule for all CAFOs to implement phosphorus spreading rates by December 31, 2006, and many CAFOs, as well as CFOs, have already proactively made this adjustment absent an explicit rule requirement. The rule contains a timeframe of seven (7) years for farms to convert to ease the transition. Phosphorus-based application is a requirement under the CWA for all large CAFOs holding a NPDES CAFO permit. IDEM believes the transition time allowed for CFOs to come into compliance with the phosphorus-based application rates will ease the financial burden and in the long run assure that land application fields remain viable and do not become over-saturated with phosphorus, the runoff of which is a serious concern for Indiana waterways.

*Comment:* While substantial and potentially detrimental financial impact is anticipated, an accurate estimate of the true fiscal impact may be difficult or impossible to obtain, because current soil tests for phosphorus are not available across the broad range of livestock operations and management systems within the state. (PU)

*Response:* Soil tests for phosphorus are readily available and cost approximately \$10 per sample. The most basic manure and soil tests offered by the most widely-used labs in the state will contain the phosphorus information needed; no extra costs are associated with the phosphorus test requirement. It is likely that if a facility is meeting the current manure and soil testing requirements found in current [327 IAC 16](#), the facility is most likely already collecting the information required for the phosphorus test requirements under the draft rule. IDEM has determined that the fiscal impact of the updated requirements are not as substantial as initially thought prior to rule revisions that take into account differing requirements for large vs. smaller facilities. Again, the rule contains a timeframe of seven (7) years for farms to convert to ease the transition.

*Comment:* The new provisions also have potential to limit the ability of producers to adopt future technologies that might mitigate the fiscal impact of regulation. For example, limiting manure applications to annual phosphorus needs may unintentionally limit the potential for producers to adopt new technologies that tailor diets, manure handling, and manure application to the nutrient needs of a multi-year crop rotation. (PU)

*Response:* IDEM believes that sufficient flexibility has been built into the rule to allow for innovative technologies in the areas of manure management and nutrient application. [327 IAC 19-14-2](#), for example, provides that the commissioner may approve an alternative amount of acreage than would be required to meet the land application limits within the rule if the permittee can demonstrate that innovative technologies or alternative methods of manure management would ensure compliance with the storage and manure handling requirements within the rule. Additionally, the rule allows for a nitrogen-based land application if soil tests indicate that phosphorus content in the soil is very low.

*Comment:* Other costs associated with this proposed rule include the development of storm water retention/pollution prevention, treatment, and disposal. Comments made during the second notice only referred to the incurred cost for the development of the plan, rather than costs directly or indirectly associated with the implementation of the plan, construction, surface grading, runoff collection, storage, treatment, application and management. In many cases, creation of storm-water retention ponds, pumps for lagoons or other storage, irrigation systems, etc. will cause substantial economic impact to the operation. (PU) (LPRRG)

*Response:* The storm water requirements have been amended to reflect the distinction between federally-defined CAFOs and state-defined CFOs. The initial uniform approach mirrored Indiana's current CAFO language to extend coverage to all farms. The rule language has been updated to divide CFOs and CAFOs. CFOs will be subject to a simplified certification based on best management practices, while CAFOs will remain subject to the requirements of 40 CFR 122.23(e) as applicable. The requirements for CFOs are not as extensive as originally proposed, but still require operations to use and consider good management practices in managing storm water.

*Comment:* No reference is made as to the fiscal impact of the groundwater monitoring requirements at [327 IAC 19-10-1](#) nor to the construction quality assurance plans in [327 IAC 19-12-4](#). As proposed, ground water monitoring will have a huge financial impact upon facilities which are required to monitor. The requirement for construction quality assurance plans will also greatly increase cost, and we do not believe that this requirement will provide additional environmental protection. (LPRRG)

*Response:* Ground water monitoring has only been required when a waste management system is proposed in a setting deemed a sensitive area. Currently, less than one percent (1%) of all regulated CFOs and CAFOs are performing any type of ground water monitoring. The inclusion of the requirements is an effort to standardize permit conditions already currently implemented through policy. In most cases permittees have eliminated the necessity for groundwater monitoring by either relocating the waste management system outside of a sensitive area or by the use of design and construction specifications that ensure adequate environmental protection. The effort regarding quality assurance plans is much the same. Less than one percent (1%) of facilities have been required to submit assurance plans, and the inclusion of this requirement in rule is intended to standardize this requirement when, and if, required.

*Comment:* Regulations should give incentive for an operation to go above and beyond the minimum regulatory requirements. If the new regulation significantly differentiates between CFO requirements and NPDES CAFO requirements, the end result can reduce the fiscal impacts to the regulated community, and provide additional environmental protection at no additional cost to the taxpayer. (SDS)

*Response:* There are a number of distinctions between the state CFO and the NPDES CAFO regulations, many of which are driven by state statutory requirements for CFOs as defined under Indiana law. While the regulations do not have specific incentives to go "above and beyond", there is a great deal of flexibility built into the rule to allow owners and operators to use management practices that prove to be the most effective and efficient way to meet the regulatory requirements, be good environmental stewards, and run the farms in an efficient way.

*Comment:* IDEM must demonstrate how they propose to ensure equal and consistent treatment and implementation of rules at all facilities regardless of location or size. How will IDEM ensure that rule interpretation will be uniform across the state and not subject to differing interpretations from individual compliance inspectors? Otherwise, some facilities are put at a competitive disadvantage by bearing additional costs that other farms do not. Many of the proposed operational practices will require additional oversight by IDEM to ensure equal treatment for all facilities. How has IDEM considered these additional costs to the Indiana Taxpayer? (SDS)

*Response:* As IDEM does not propose to hire additional staff as a result of these amended rules, the Indiana taxpayer is not incurring additional costs for this rulemaking. Any regulation is subject to interpretation however, the point of this rulemaking was to update, after many years of experience running the program, the requirements for state-defined CFOs. The rules as amended have been written to clarify as much as possible operating requirements for all CFOs in the state. Existing guidance will also be updated to coincide with the updated regulations. Such guidance material is available to the public as well as IDEM compliance staff. As inspectors are required to provide a written report of an inspection, this is a tool IDEM uses to assure consistent interpretation and implementation of regulations.

*Comment:* Current federal NPDES CAFO rules do not require farms which self certify that they do not propose to discharge to conduct phosphorus based land application. The fiscal impact will be greater than what IDEM suggests. IDEM should evaluate the fiscal impact of this rule against the requirements of the current CFO

rule only and not against the requirements of the current NPDES CAFO rule. (SDS) (MJMcC)

*Response:* The fiscal impact analysis of the CFO rule is based on the amendments to the CFO rules and what compliance with this rule will cost all entities to whom it applies. Any reliance on information related to the federal NPDES CAFO regulation is only for purposes of comparing what costs would be caused by federal NPDES requirements versus the state CFO requirements. Many state CFO requirements apply to CAFO NPDES sources as well.

*Comment:* The NRCS 590 standard specifically allows phosphorus applications on a multi-year rotational basis. There is no such provision in the draft rule. IDEM is not considering that there are implementation differences between current CFO rules and the draft rule that will result in a more significant fiscal impact than IDEM is suggesting. IDEM should reevaluate the fiscal impact of the proposed rule. (SDS) (MJMcC)

*Response:* IDEM will continue to refine the fiscal impact estimate based on information received and continuing research into costs to implement the rule.

*Comment:* If IDEM lacks the authority to require any kind of bonding for CFOs, then who pays for the cleanup of the site resulting from a spill or closure which leaves the site contaminated? (ML)

*Response:* To the extent that a viable responsible party is available, i.e. the owner of a CFO; when a clean-up is necessary, that person is responsible for cleanup costs. In situations that may require an immediate response or require the state to step in and remediate a site that is left contaminated, the normal cost recovery procedures the agency uses for such sites would be implemented. The state will pursue all responsible parties to seek their share in cleanup costs for such sites.

#### **AFO Discharges, Accidental or Intentional**

*Comment:* Under Ind. Code § 13-11-2-40(3) and the draft rule section [327 IAC 19-2-5](#), an AFO "that causes a violation of water pollution control laws" is defined as a CFO, and thus must obtain CFO program approval. Any unpermitted AFO that discharges pollutants from a point source to waters of the State would violate Clean Water Act § 1311(a) and [327 IAC 5-2-2](#). All that is required is a finding by IDEM that an unpermitted AFO discharged pollutants from a point source to waters of the State. Such a finding may be supported by data gathered by IDEM or by third parties. See 40 CFR §§ 25.9 and 123.26. (HEC) (CLC) (SC) (CAC)

*Response:* IDEM agrees that any AFO that causes a violation of water pollution control laws is subject to becoming a CFO subject to regulation under the CFO program. Based on the individual circumstance of the violation, if IDEM determines that the CFO has discharged, IDEM may, after an on-site inspection of the operation, designate the AFO as a CAFO and require it to apply for a CAFO NPDES permit.

*Comment:* Any CFO or CAFO that discharges to waters of the state should be required to enter the CFO/CAFO program. (JJH) (BSC) (AJH) (ECCRC)

*Response:* Any entity defined as a CFO under [IC 13-11-2-40](#) is required to enter the CFO program, regardless of whether a discharge has occurred. In the case of a CFO that has had a discharge, the state may determine that the CFO is then required to get a NPDES discharge permit and be designated as a CAFO under the CAFO NPDES regulations.

*Comment:* Self-certification is not appropriate. Who will check to see if the information provided by the owner is accurate? (KP)

*Response:* Self-certification was a concept contained in the federal CAFO NPDES regulations. That particular provision has been struck down by the court and is no longer part of the regulation. It was never part of the state CFO regulations.

#### **Rule 1. General Provisions**

*Comment:* [327 IAC 19-1-2](#). We would suggest that IDEM change this to read "Any increase in animal capacity, animal number, or manure containment capacity if above 10% of the number of approved animals", and if the manure storage capacity and manure management plan were sufficient to handle this amount of additional animals for the specified length of time, the re-permitting process likely is not needed. (PU)

*Response:* This provision is taken directly from [IC 13-18-10-1](#); attempting to "clarify" statutory language would only serve to confuse those reading the rule. As the statute is controlling, exact use of the statutory language is appropriate in this case. Copying the statute has eliminated the reference to changes in animal numbers.

*Comment:* All CFOs, regardless of size, should have to comply with a single set of requirements, including the requirements currently applied under Indiana law to permitted CAFOs, the requirements of the 2008 revised federal NPDES regulations, and any additional protective measures determined by IDEM based on the risk of discharge. (ECCRC)

*Response:* IDEM believes consistency in regulation is important. However, agricultural operations are difficult to regulate under a "one-size-fits-all" scheme given the variety of operations. The state CFO requirements derive from state statutes that require regulation of CFOs of a certain size and also contain construction requirements not found in the federal NPDES CAFO regulations. These requirements do apply to all CFOs and CAFOs within the state. IDEM does not agree that the federal CAFO NPDES requirements should apply to all state CFOs as well.

*Comment:* There should be substantial fines for owners submitting false reports, and where there is pollution



the fines should be substantial and actually paid. (KP) (FD)

*Response:* IDEM agrees.

## **Rule 2. Definitions**

*Comment:* The term "waste" appears most notably in the proposed definition of "manure," but it also appears repeatedly throughout the other definitions in this section. "Waste" should not be included in the definition of manure and the terms "manure," or "excreta," or other appropriate terminology should be substituted for "waste" throughout these definitions. (LPRRG)

*Response:* These terms have been commonly used for a number of years in existing regulations as well as statutes. IDEM does not intend to remove the term waste from the rules. Materials not reused for land application or other nutrient production are, in fact, waste materials as byproducts of the raising of livestock.

*Comment:* [327 IAC 19-2-6](#) "Constructed wetlands". We suggest editing to add "treated" lagoon effluent to this definition. (PU)

*Response:* This is a no discharge rule, so allowing effluent from lagoons would not be appropriate.

*Comment:* [327 IAC 19-2-7](#) "Construction". For clarification for producers, this rule should also define what a "facility" is. (PU)

*Response:* This definition is from statute. The general assembly defined "facility" for many articles and chapters of Title 13, but chose not to define it for [IC 13-18-10](#). Utilizing the dictionary definition of facility is adequate for its usage in the rule.

*Comment:* [327 IAC 19-2-8](#). "Contaminated run-off" needs to be clarified to fully explain the scope of the term. There have been concerns raised that contaminated run-off may include the mixture of dust and rainwater that comes from the roof of production facilities. Also, we are concerned that there may be efforts to expand this to include the mixture of rainwater and dust from exhaust fans. (LPRRG)

*Response:* This matches the current definition in the existing CFO rule. Clarification of this term is better left to EPA guidance relating to enforcement of the 2008 NPDES CAFO rule.

*Comment:* [327 IAC 19-2-10](#). "Discharge" should include a specific exclusion for agricultural stormwater. The NPDES program as defined in the Clean Water Act includes such a specific exclusion from the definition of a discharge. (LPRRG)

*Response:* There has never been an exemption for agricultural storm water in this definition. It is almost identical to EPA's definition in 40 CFR 122.2. Further, the agricultural storm water exemption found in the federal NPDES CAFO program only applies when the person discharging can show that the land application activities were done in conformity with best management practices and the nutrients were applied at a rate to ensure appropriate agronomic uptake of the nutrient into the soil or crop to which it was applied.

*Comment:* [327 IAC 19-2-18](#). IDEM should recognize that determining whether land meets the definition of "highly erodible land" may be more complicated than a single definition. Should questions arise, IDEM should reference the NRCS Indiana Field Office Technical Guide Section II – Highly Erodible Land. (LPRRG)

*Response:* IDEM had changed the definition to match the NRCS definition.

*Comment:* [327 IAC 19-2-20](#) "Incorporation". It is proposed to include the definition of injection separate from incorporation. "Injection" means the placement of liquid manure beneath the surface of the soil in the crop root zone using equipment specifically designed for this purpose. (MV) (LPRRG)

*Response:* IDEM agrees with this comment and has added a definition for injection.

*Comment:* [327 IAC 19-2-22](#) "Manure". It is proposed that the definition of "manure" not be changed and if necessary a new, separate definition of "composted mortality" be developed specific to the characteristics of this material. (MV) (LPRRG)

*Response:* IDEM has revised the definition of manure in the new draft language.

*Comment:* [327 IAC 19-2-22](#) "Manure". We are opposed to changing the term "excreta" to "waste." For environmental regulations, "waste" is a term of art which connotes a by-product from a process with little to no value. Manure is not a waste product in that it has a beneficial use as a nutrient source for crop and forage production. We suggest that the definition should revert to the definition currently found in [327 IAC 16-2-22](#) (LPRRG)

*Response:* IDEM has revised the definition of manure in the new draft language.

*Comment:* [327 IAC 19-2-23](#). We suggest that the definition of "manure application" in [327 IAC 19-2-23](#) include reference to injection as a separate form of manure application. (LPRRG)

*Response:* IDEM has revised this definition to match the current definition in [327 IAC 16](#).

*Comment:* [327 IAC 19-2-24](#). "Manure Storage Facility" - This term ostensibly replaces both "Manure Storage Structure" ([327 IAC 16-2-24](#)) and "New Manure Storage Structure" ([327 IAC 16-2-27](#)), which was also eliminated in the draft rule. If it is IDEM's intent to have all manure storage facility requirements in the draft rule apply both to new and existing manure storage facilities, we must examine the possible ramifications of these requirements on existing manure storage facilities. Similarly, the current CFO rule also contains several specific references to "liquid manure storage," which appears nowhere in the draft rule. If all requirements that apply to liquid manure storage only in the current rule now apply to all manure storage structures, the ramifications of this are also concerning. (LPRRG)

*Response:* The term replaces "manure storage structure". The applicability of the term should be clear based on how it is used in the draft rule.

*Comment:* [327 IAC 19-2-24](#) "Manure Storage Facility" - We are also concerned with the inclusion of the phrase "manure containment area" in the definition of "manure storage facility." Manure containment area is not defined, but the remaining terms would seem to include any possible structure which could be used to store manure. We suggest that "manure containment area" be removed or that "manure containment area" be defined so that comment can be made. (LPRRG)

*Response:* This definition matches the current definition of "waste storage structure" from [327 IAC 16](#). IDEM has had no problems with the interpretation of "manure containment area".

*Comment:* [327 IAC 19-2-25](#) "Manure transfer system". We suggest addition of "channels or anything that will convey manure". (PU)

*Response:* IDEM agrees with this comment and the definition has been revised.

*Comment:* [327 IAC 19-2-27](#) "owner/operator". Clarification is needed as to whether this also would include a third party applicator and/or contractor and what activities from [327 IAC 19-1-1\(a\)](#) would constitute a co-permit. We submit that the person or entity responsible for the "activity" and "management" be the legally responsible entity for the purposes of the permit. (PU) (LPRRG) (SDS)

*Response:* This definition is from the current [327 IAC 16](#) and IDEM sees no reason to change it. This rule is not intended to direct or infringe upon the private contract rights and duties of third parties performing services for owners and operators.

*Comment:* [327 IAC 19-2-28](#) "Potentially available nitrogen". It is proposed that this definition be revised to state "means the amount of nitrogen that is realistically available to be utilized by a crop during one (1) growing season." (MV) (LPRRG)

*Response:* This term no longer appears in the draft rule, so IDEM has deleted the definition.

*Comment:* Despite the definition of "Potentially available nitrogen", the term is not used in subsequent text. Use of the phrase "realistically taken up by a crop" could be taken as "all" or "loss due to timing of manure application". If needed, this definition should be revised to include losses due to application method and timing. IDEM's position of not allowing inclusion of nitrogen losses for manure based on time and application method is not based on science in any conceivable way; and Indiana is the only one of the 36 US states we have worked with that has such a policy. (PU) (T & M) (MJMcC) (SDS)

*Response:* This term was used in the draft rule in [327 IAC 19-14-3\(b\)](#). However, IDEM has revised nutrient application language so the term no longer appears.

*Comment:* [327 IAC 19-2-29](#) "Process wastewater". We suggest that "manufacturing and processing" be further defined and specific examples be given within the guidance document to make this clearer for a producer. (PU)

*Response:* This definition has been revised to match the definition currently in [327 IAC 5-4-3](#).

*Comment:* [327 IAC 19-2-30](#) "Production area". This definition includes "composting piles" as part of the "manure storage area." It is not clear if this is composted manure or if IDEM is suggesting that this is "composted mortality" included in the definition of "manure." If this is meant to refer to "composted mortality," we do not believe that it should be included as part of the manure storage area. It is an entirely separate part of the operation. However, it is appropriate to consider "composted manure piles" as part of the manure storage area. (LPRRG)

*Response:* This definition is verbatim from EPA's definition at 40 CFR 412.2. Composting piles are considered to be composted manure piles. The term "composted mortality" has been removed from the draft definition of manure.

*Comment:* [327 IAC 19-2-34](#) "Sensitive area". We suggest that "critical habitat" be rephrased to "habitat where an endangered species lives that would be impacted by a water quality threat." We also do not believe that just because something is a "natural area" that it automatically poses a specific water quality threat. (LPRRG)

*Response:* The phrase "where conditions exist" ensures that only areas that pose a specific water quality threat would be included in this definition.

*Comment:* [327 IAC 19-2-35](#) "Site preparation". The changes to this definition are necessary and appropriate. IDEM is complimented for developing a definition that includes a realistic description of many of the components associated with site preparation. (MV)

*Response:* IDEM agrees with this comment.

*Comment:* [327 IAC 19-2-36](#) "Spill". It is unclear why the current definition of spill must be modified to explicitly include the term "manure." We are not aware of any situations where someone has claimed an incident was not a "spill" because the product was manure. If the procedure is now to list out specific products, then all possible contaminants should be listed. (LPRRG)

*Response:* The definition of "spill" has been changed to reference the definition in the existing spill rule at [327 IAC 2-6.1-4\(15\)](#). Originally IDEM included the term "manure" specifically to highlight the fact that it would be considered one of the substances for which spill reporting requirements would apply. Its inclusion was meant to clarify, not confuse.

*Comment:* [327 IAC 19-2-40](#) and [327 IAC 19-2-45](#) "Surface water" and "Waters". "Waters," which would appear to be the broadest category, specifically excludes private ponds, as well as off-stream ponds, reservoirs, or facilities built for reduction or control of pollution or cooling water prior to discharge. "Surface waters," which would appear to be a subset of "waters," includes "water present on the surface of the earth, and specifically is defined to include ponds. It would appear that the definition of "surface water" should be limited by the definition of "waters." (LPRRG)

*Response:* The term "waters" has a specific statutory definition found at [IC 13-11-2-265](#). The term "surface water" is not derived from state statute but is used within the context of the CFO rule as an explanatory term to define setbacks, for example. Waters that are exempt under the state definition of "waters" may be otherwise regulated by IDEM in other programs. For example, the exempt isolated wetland is regulated and ponds used for pollution control are regulated under various IDEM permit programs. Therefore, where necessary to maintain water quality standards and protect Indiana's waters, IDEM can place restrictions on the proximity of certain activities to all sorts of waters, especially if there is or may be a hydraulic connection to other waters of the state.

*Comment:* [327 IAC 19-2-43](#) "Waste liquid". The term "clean-up water" needs further definition as there can be questions whether this is applicable to water used for sanitation and whether water from misters or ventilation cooling or milk cooling would be included. (PU)

*Response:* Yes, this definition includes water used for sanitation. If additional clarity is needed, IDEM will explore the possibility of updating the CFO guidance documents on this point.

*Comment:* [327 IAC 19-2-44](#) "Waste management system". Requirements intended to be placed on manure storage and handling systems in several sections of this draft rule should not apply to mortality composting and process wastewater. (LPRRG)

*Response:* IDEM agrees with this comment and has revised the definition.

*Comment:* [327 IAC 19-2-45](#) "Waters". The current definition at [327 IAC 16-2-45](#) and the definition in this draft rule vary in part (b) from the statutory definition at [IC 13-11-2-265](#). We cannot support the changes in the definition from the statutory definition. (LPRRG)

*Response:* IDEM agrees with this comment and has revised the definition.

### **Rule 3. Performance Standards**

*Comment:* [327 IAC 19-3-1](#). We are seeking clarification as to what will constitute a "discharge to waters of the state." Instances where manure may leave the designated application area through no fault of the individual who applied the manure should not be considered discharges. (LPRRG)

*Response:* A discharge to a water of the state is, on its face, a fairly straightforward concept. As to whether the discharge is someone's fault or is caused by something else out of the control of the operator is something that has to be determined in every situation wherein a discharge has occurred. Attempting to clarify through rule language would necessitate an exhaustive list of potential situations that would inevitably fall short of being complete and would not, therefore, serve to clarify what is considered a discharge.

*Comment:* [327 IAC 19-3-1](#)(c). We suggest that "immediately" should be removed from (c). The term "immediately" implies that an incident is occurring and that immediate action needs to be taken to remedy the situation. (LPRRG)

*Response:* IDEM agrees and has deleted "immediately".

*Comment:* [327 IAC 19-3-1](#)(d). We are concerned with the ability of livestock and poultry operations to "ensure compliance with the water quality standards in [327 IAC 2](#)." While we certainly agree that livestock and poultry producers are responsible for ensuring against unpermitted discharges into the waters of the state, most of [327 IAC 2](#) is outside the scope of what these producers can control. (LPRRG)

*Response:* [327 IAC 2](#) applies to all waters of the state with the exception of the Great Lakes basin areas subject to somewhat more stringent standards. Taking it out of this rule would not change that.

*Comment:* [327 IAC 19-3-1](#)(e). IDEM should take this opportunity in rule-making to establish a registration process for out-of-state transport of manure and other CAFO waste products before those pollutants are stored or staged on land prior to disposal by land application. Registration could be a simple form that identifies where the manure came from, the volume to be stored/staged, the person(s) responsible for the waste when it enters Indiana with contact info, and the location of final disposal. (KJM)

*Response:* The regulation of out-of-state manure is an issue best addressed by the Indiana legislature. Currently the authority to regulate manure from out-of-state operations lies with the Office of the State Chemist (OSC). OSC is currently developing regulations for fertilizer use, including animal nutrients, for all land application within the state. The draft rule would require out-of-state distributors to be certified in Indiana and stage and land apply in accordance with OSC rules.

*Comment:* [327 IAC 19-3-1](#)(e)(2). With respect to the performance standards for manure staging, there is concern with the requirement that manure be staged or applied in a manner to prevent run-off or ponding for more than 24 hours. This provision should be amended to state that run-off and ponding should be minimized. (LPRRG)

*Response:* This language is from the current [327 IAC 16](#) and IDEM sees no reason to change it. It is inaccurate to say that ponding and run-off should be minimized, they should be prevented. The time-frame

provides a gauge whereby the person can assess whether he is meeting this standard.

*Comment:* [327 IAC 19-3-1](#)(e)(3). This provision is vague and should be stricken. Otherwise, guidance should be provided as part of this rulemaking so that criteria for minimizing leaching beyond the root zone can be discussed. (LPRRG)

*Response:* This language is from the current [327 IAC 16](#) and IDEM sees no reason to change it. The performance standards are general standards that set forth the general requirements for management of a CFO. More specific requirements are included within the rule but the performance standards are intended to be the framework within which the CFO operates.

#### **Rule 4. General Approval Conditions**

*Comment:* [327 IAC 19-4-1](#)(c). Language similar to that found in 19-5-1(c) should be included as a provision in [327 IAC 19-4-1](#). (LPRRG)

*Response:* IDEM agrees with this comment and has added language to reflect that.

*Comment:* [327 IAC 19-4-1](#)(c). If IDEM has required additional design standards in the past – those standards should be incorporated into the regulations with action triggers so that both industry and public understand what options have/can be used to further protect human health and environment. (KJM)

*Response:* This provision is included to ensure CFOs with site-specific concerns maintain protection of human health and the environment. Decisions on additional requirements are very fact sensitive and therefore difficult to describe in a general statement of applicability. It would not be practical to try and include a list of all possible conditions that could trigger [327 IAC 19-4-1](#)(c).

*Comment:* A CFO located in a sensitive area should be required to have an individual NPDES permit (ECCRC)

*Response:* IDEM does not agree that an individual NPDES CAFO permit should be required for any CFO located in a sensitive area. IDEM believes that the design and operational requirements for all CFOs, including enhanced requirements for sensitive areas are sufficiently protective of Indiana's environment, including those areas labeled "sensitive" under the CFO regulations.

#### **Rule 5. Alternate Design or Compliance Approach; Innovative Technology**

*Comment:* [327 IAC 19-5-1](#). For Alternate technologies, clarification is needed (and examples and targets given within the guidance document) if the target for the technology was to create "clean" effluent/water for discharge and how this would fit into the existing rule. What is the performance standard for discharge? (PU)

*Response:* This is a no discharge rule; therefore there is no performance standard for discharge. IDEM agrees that guidance would be the best place to discuss alternative technologies and provide examples. However, putting specific parameters on alternate technologies within the rule somewhat defeats the purpose of allowing for approval of something alternative to the standards contained within the rule. If a permit holder can demonstrate alternative design or management technologies that are as protective of human health and the environment as those within the rules, IDEM does not want to inhibit the use of such technologies but rather encourage them.

#### **Rule 6. Existing Confined Feeding Operations**

*Comment:* [327 IAC 19-6-1](#). We believe that [327 IAC 19-6-1](#) should be revised to clarify that it applies to existing confined feeding operations with a CFO approval. (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-6-1](#)(a). A better and more inclusive list should be used, such as "compliance with all applicable state, local, and federal laws". (KJM)

*Response:* There are no federal laws regulating animal feeding operations below the CAFO thresholds and a CFO that becomes designated as a CAFO must then follow the CAFO NPDES regulations. The current list is comprehensive.

*Comment:* [327 IAC 19-6-1](#)(b). It is not appropriate to require operations to make changes to any plans or operation until it is clear what the final version of the rule will be. We request that compliance be required six months after the effective date. (LPRRG)

*Response:* IDEM controls the effective date of the article. At a minimum there would be three months between final adoption by the board and the effective date. If deemed necessary, IDEM can extend that timeframe.

*Comment:* [327 IAC 19-6-1](#)(c). This group is under the impression that the approval only indicates that there is a minimum of 180 days of storage. If no other indication of storage capacity exists in the approval, this provision should be clarified to indicate that an approval amendment is required when an increase in manure generated would reduce the storage capacity to less than 180 days storage. (LPRRG)

*Response:* IDEM agrees with this comment and has changed the language from "approved" to "required".

*Comment:* [327 IAC 19-6-1](#)(d). We suggest modifications to this section to not require producers apply for a new permit, such that they could increase animal numbers up to a specified percentage above which is currently permitted (we would suggest 10%) if the manure storage capacity is sufficient. (PU)

*Response:* IDEM has removed "animal number" from this provision. It now matches the language in [IC 13-18-10-1](#).



*Comment:* [327 IAC 19-6-1](#)(d). [IC 13-18-10-1](#) only lists "animal capacity and manure containment capacity" as triggers for seeking approval from the department. It thus appears that requiring an approval just for an increase in "animal numbers" is outside of the scope of the authority granted by the General Assembly. Additionally, (d) states that a new application is required according to "[IC 13-18-10-1](#) and the requirements therein." [IC 13-18-10-1](#) does not contain any requirements for an application other than to state that an approval from the department is required in certain circumstances. (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language to match the statute.

*Comment:* [327 IAC 19-6-1](#)(e). We question how it can be stated that an existing approval remains in effect when new requirements are being placed upon that operation. (LPRRG)

*Response:* [327 IAC 19-6-1](#) has been reconfigured to list the specific requirements that will apply to existing CFOs in relation to their existing approvals upon the effective date of the rule. Certain operational requirements have a compliance date of 90 days after the effective date of the rule.

*Comment:* [327 IAC 19-6-1](#)(f). We understand this to mean that extremely small operations (including those under the CFO animal numbers) may be required to expand their manure storage capacity. We anticipate that this provision will do nothing more than to force those operations to shut down. We suggest that [327 IAC 19-6-1](#)(f) be amended to state that the commissioner shall provide written documentation of why the waste management system must be modified. (LPRRG)

*Response:* IDEM does not have the authority to regulate any farm that does not meet the definition in [IC 13-11-2-40](#). The only way an AFO under CFO numbers would fall under this rule would be if they were causing a water quality violation, in which case IDEM would take all necessary steps to ensure protection of human health and the environment. IDEM has added language requiring written documentation from the commissioner explaining the basis for any modifications.

#### **Rule 7. Application Requirements**

*Comment:* The draft CFO rule does not require notice to the public of application submittal. Provision of a public comment period is meaningless without such notification. (HEC) (CLC) (SC) (CAC)

*Response:* The notice requirements in the rule were established by the legislature and require notice to a county executive and any one that owns property within ½ mile of the proposed structures. In addition, applications received by the department are posted on IDEM's website. Listservs are available to allow people to get notice of such postings from IDEM

*Comment:* [327 IAC 19-7-1](#). We believe it is unnecessary to require a new CFO application for those farms that already hold NPDES permits. Those operations went through an application which included approval for construction under the CFO program and the more rigorous requirements of the NPDES program for operation. (LPRRG) (MV)

*Response:* IDEM agrees with this comment and has deleted this provision as well as added language in LSA #09-213 (the NPDES CAFO rules) to allow for an administrative process for those CAFOs with NPDES permits to transition to a CFO approval.

*Comment:* [327 IAC 19-7-1](#). The language in [327 IAC 19-7-1](#) should be clarified that the application process applies to those operations not previously regulated under the CFO program or which are expanding animal capacity or manure containment capacity. The other option is to place language in [327 IAC 19-6-1](#)(d) stating that the application must comply with [327 IAC 19-7-1](#). (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-7-1](#)(c)(10). The General Assembly amended [IC 13-18-10-2](#) to require that notice be provided to owners and occupants within one-half mile of certain structures. We suggest that the phrase "adjacent landowners" be removed from [327 IAC 19-7-1](#)(c)(10) and the language should remain just "potentially affected parties" or the appropriate language with respect to those within one-half mile should be added. (LPRRG) (MV)

*Response:* IDEM has removed "adjacent landowners" from this provision and has added [IC 13-15-8](#).

*Comment:* [327 IAC 19-7-1](#) (c)(11). IDEM should have a higher fee associated with CAFO permit applications in order to generate additional monies for compliance and enforcement of those permits. Several States use a sliding scale that causes an increase in fee based on animal numbers – this puts a higher fee on the largest facilities which generate the most pollution. (KJM)

*Response:* This rule concerns CFOs, not NPDES CAFO permits. Additionally, fees can only be established, or revised, by the legislature.

*Comment:* [327 IAC 19-7-1](#)(c)(13): This provision is confusing and unnecessary. It is proposed that it be deleted. (MV) (LPRRG)

*Response:* IDEM disagrees that the provision is confusing and unnecessary. IDEM has had a number of instances where parcels within a CFO facility are divided up among several owners in an apparent effort to avoid regulation under the CFO program. The land continues to be operated as a single operation in practice. If the land is owned by several different people but under the control of an owner /operator as that term is defined within this rule, and operated in practice as a CFO, it is a CFO for purposes of regulation and must meet the requirements of these rules.

*Comment:* [327 IAC 19-7-1](#)(d). We believe that this language is unnecessary. If this provision is meant to

apply to those who must report past material violations of environmental laws, this information is irrelevant to any consideration which IDEM would need to make with respect to previously alleged environmental violations. If it is meant to apply to all operations seeking an approval, the requisite information related to soil testing and fertility levels is already contained within the manure management plan. (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-7-1](#)(d). There is no reason for specific field soil tests to be included in the application. That material is more appropriately kept on the farm where it can be reviewed by IDEM inspectors if needed. Also, phosphorus is the only nutrient which should be a concern in soil testing for purposes of this rule. Producers who choose to use application methods other than surface application should be allowed to use the relevant setback in their calculations. (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-7-1](#)(d). We suggest changing this to read ". . . be no more than 4 years old". Purdue University's fertilizer recommendations are built upon a 4 year soil testing interval. (PU) (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-7-1](#)(d). Currently, the use of terms such as "soil test P" or "phosphorus levels" need further definition to distinguish which soil test method was implemented (e.g. total P, Mehlich 3, Bray P, or even an Olsen P) which have very different characteristics and implications. Presumably, the rule was meant to provide reference to a Mehlich 3 or Bray phosphorus soil test level taken from the 0 to 8 inch depth. This must be clearly stated. (PU)

*Response:* IDEM has revised this language.

*Comment:* [327 IAC 19-7-2](#)(a)(1) and [327 IAC 19-7-3](#)(g). IDEM needs to consider the legibility of soil maps and farmstead plan drawings submitted in the permit application with respect to ability to scan into the virtual file cabinet and whether or not the printed version from the VFC is legible. (KJM)

*Response:* IDEM will do everything possible to ensure that VFC documents are legible, but we are confined by current technologies.

*Comment:* [327 IAC 19-7-2](#)(a)(2). This provision should require the applicant to map all wells, public and private within 1000 feet of the proposed manure storage facilities. (KJM)

*Response:* The map currently requires the map to show all public wells within 1000 feet, and private wells within 500 feet. IDEM feels this is sufficient to protect human health and the environment.

*Comment:* [327 IAC 19-7-2](#)(b)(2). We suggest that the plot maps include the boundaries of the parcels that contain the actual livestock and poultry production areas as well as the manure storage structures. For (b)(6) only the names of the owners of the parcels where the actual animal production and manure storage facilities are located should be included. (LPRRG)

*Response:* IDEM has revised the language to include the boundaries of the parcels that contain the actual livestock and poultry production areas. IDEM deleted (b)(6) and included that provision in (b)(2).

*Comment:* [327 IAC 19-7-2](#)(b)(4). Our recommendation for additional consistency would be to adopt the Indiana NRCS setback standards for land application of manure to ensure consistency for producers working with both agencies. (PU)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-7-2](#)(b)(4). The requirement should be that setback calculations will be made based upon the type of application to be done. (LPRRG)(PU)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-7-2](#)(b)(5). We are opposed to the requirement that the name of the owner of parcels where manure will be applied is included. This rule already requires that parcel maps with application field boundaries be included. This additional requirement of providing the landowner's name will not provide any additional information upon which important environmental considerations will be used. (LPRRG)

*Response:* IDEM agrees with this comment and has deleted this provision.

*Comment:* [327 IAC 19-7-2](#)(b)(6). What constitutes a "parcel" of a CFO that hasn't already been listed in [327 IAC 19-7-2](#)? What other structure or land area is this term referring to? If another owner owns another manure storage facility not located on the proposed production area, that would be a satellite storage structure to which the CFO approval would not apply. (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-7-3](#)(a). The inclusion of the existing structures is unnecessary as that information is already included as part of the facility detail page of the CFO application. (LPRRG)

*Response:* It is necessary that this information be included in both the facility detail page and the farmstead plan. Having one without the other would render both meaningless.

*Comment:* [327 IAC 19-7-3](#)(a). Identifying structures within 500 feet of the waste management systems is confusing and needs to be rewritten because numerous individuals have interpreted the provision differently. We believe that it is stating that all buildings on the farmstead must be identified and that special features included in the listing from (1) to (9) that are within 500 feet of a waste management system must be included. (LPRRG)

*Response:* IDEM does not believe the language to be unclear and agrees with the interpretation. The

features listed, if they are within 500 feet of a waste management system, must be included in the farmstead plan.

*Comment:* [327 IAC 19-7-5](#). Manure management plan – The prior use of this term in CFO regulations is highly misleading and should be called a Sampling and Analysis Plan. If IDEM is trying to create a Nutrient Management Plan rule that meets the requirements of NPDES – then this older term should not be used in this new rule. (KJM)

*Response:* Manure management plan is a term used in statute; changing the term would lead to further confusion.

*Comment:* [327 IAC 19-7-5](#). The draft rule section omits several requirements included in the federal regulations on nutrient management plans (NMPs) under the NPDES program. See 40 CFR § 122.42. Federal requirements for NMPs should be included in the manure management plan requirements under the CFO rule. (HEC) (CLC) (SC) (CAC)

*Response:* This is not a NPDES rule. Requiring all CFOs to comply with all federal NMP requirements would be unnecessarily burdensome. IDEM can only require what is defined in [IC 13-18-10-2.3](#) as a manure management plan.

*Comment:* The manure management plan should be an enforceable component of the CFO permit and all records pertaining to its implementation should be publicly available. At a minimum, the plan should include:

1. Location of the facility and proximity to drain tiles and waters of the state.
2. Number and type of animals.
3. A full definition of waste management techniques including where and how often manure is applied.
4. What crops are used to absorb nutrients.
5. Mass and concentration of nutrients and pathogens with maximum application amounts, types and locations.
6. Seasonal constraints such as no winter or frozen ground operations, and precipitation related restrictions. (ECCRC)

*Response:* The manure management plan requirements can be found at [IC 13-18-10-2.3](#). As the plan is required to be submitted to the department, it is a public record and thus publicly available. Much of what the commentor wants in the manure management plan is contained in other records CFOs are required to keep, such as the operating record. IDEM is attempting to balance the need for the dissemination of public information and allow for public comment with the need of the CFO to be able to operate on a daily basis and do so in an efficient and environmentally protective manner.

*Comment:* [327 IAC 19-7-5\(a\)\(4\)](#). IDEM's concern should be that land is available for manure application for each year of the approval, but not that particular acreage is under contract for a five-year period. We also object to the language which requires that acreage for application be calculated based upon setbacks for surface application regardless of whether surface application is being utilized. (LPRRG)

*Response:* IDEM agrees with the calculation of setbacks and has revised the language. IDEM has also moved this provision to the operating record without the "entire approval term" language.

*Comment:* [327 IAC 19-7-5\(a\)\(4\)\(C\)](#). It is more appropriate that the land use agreement be between the livestock and poultry producer and the individual who has authority to contract for the application of manure. In those instances where the land is not being used by the individual who has the land use agreement, a separate operation should be able to enter into an agreement to apply manure to the land with the original agreement being cancelled. (LPRRG)

*Response:* This rule regulates the operation of a CFO; it does not regulate or infringe upon the contractual rights and obligations between owners or operators of a CFO and third parties.

*Comment:* [327 IAC 19-7-5\(a\)\(6\)](#). Is this statement intended to address lagoon sludge management? If so, we suggest requiring a statement regarding how lagoon sludge will be managed based on the designed sludge volume for the lagoon. If this is also intended for under-floor liquid pits, then a statement would be needed to clarify how solids build up will be controlled. This statement needs significant revision to convey a clear message. (PU) (LPRRG)

*Response:* IDEM has deleted (a)(6) and added a provision for removal of solids in [327 IAC 19-13-1\(h\)](#).

*Comment:* [327 IAC 19-7-5\(a\)\(6\)](#). While not defined within the rule itself, we also suggest for improvement in allowance for design of lagoons to allow an emergency overflow as to not cut a "trough" into the side of the berm of the lagoon. (PU)

*Response:* IDEM has revised the rule to allow for, in certain circumstances, emergency land application when an overflow or damage to the lagoon is imminent. The emergency provisions, do not, however, allow for any overflows from a lagoon.

*Comment:* [327 IAC 19-7-5\(c\)](#). We suggest replacing this language to specify that a soil test must be obtained that provides sufficient information about soil fertility to allow for nutrient recommendations including nitrogen, phosphorus, potassium and lime recommendations for existing or planned crops. The frequency of this testing must:

- (1) be specified in the manure management plan; and
- (2) be conducted a minimum of once every four (4) years unless a different frequency is approved by the

department in writing and is included in the manure management plan." (PU)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-7-5\(c\)](#). The intent of 13-18-10-2.3 is to require submission of the procedures used for soil testing rather than to mandate the submission of soil tests. As this section is drafted, it implies that a soil test must be completed by the livestock or poultry producer for any field which may be utilized for manure application. (LPRRG)

*Response:* [327 IAC 19-7-5](#) does not require the submission of soil tests. It requires the submission of procedures used to conduct such tests, including frequency of testing. The information is to be maintained as part of the manure management plan which is required to be submitted to the department with any approval or renewal application. Soil tests are required for fields used for manure application.

*Comment:* [327 IAC 19-7-5\(c\)](#). We question the use of the phrase "soil fertility" rather than "soil phosphorus." Soil testing is not used to determine nitrogen levels in a field but is used to determine phosphorus levels. While we recognize that other nutrients are present in manure and that farmers will account for them, this regulatory process is not the appropriate manner in which to account for them. (LPRRG)

*Response:* Purdue University's suggested language included "soil fertility" and IDEM agrees with their comment.

*Comment:* [327 IAC 19-7-5\(e\)](#). We believe this information is better left to guidance rather than being included in the rule. (LPRRG)

*Response:* This provision was added to aid producers. The question of "how do you test manure" is extremely common, so IDEM is seeking to clarify that requirement in rule. If further clarification is necessary, IDEM will explore revising existing guidance.

*Comment:* [327 IAC 19-7-5\(c\)-\(e\)](#). Given that the manure management plan is meant to be the plan for how one will account for nutrients in the field as well as determine what is present in the manure, we suggest that [327 IAC 19-7-5\(c\)-\(e\)](#) be removed and made part of their own section. (LPRRG)

*Response:* Soil testing and manure testing are mandated by statute to be included in the manure management plan.

*Comment:* [327 IAC 19-7-6](#). IDEM should prohibit on-site burial of CAFO mortalities and should encourage the use of rendering or on-site composting as the primary disposal mechanism. This rule should also contain more details on the minimum requirements for constructing a compost facility. (KJM)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6](#). Eliminating burial in certain soil types is very restrictive and does not allow any flexibility for implementation of technology and management strategies. Producers with the listed soil types should have to ability to bury livestock if they can show that proper steps have been taken to preserve water quality. (PU)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6](#). Restrictions referring to scavenging by other animals have no relevance to water quality and should be removed from the rule. (PU) (LPRRG)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6](#). To minimize the potential for confusion, IDEM must strictly limit its intervention in this area to water quality issues. Take the provision for dead animal compost operations in the current rule at [327 IAC 16-9-3](#) and modify it by replacing "dead animal compost operations" in [327 IAC 16-9-3\(a\)](#) with "mortality management systems." This would put a requirement in place that any and all methods of managing mortality must have appropriate run-on and run-off control. This coupled with the Bureau of Animal Health's (BOAH) existing regulations would resolve this issue while minimizing the regulatory overlap. (LPRRG) (SDS)(MJMcC) (TMC)

*Response:* IDEM agrees that mortality management is best left to BOAH. Therefore, a plan is no longer required, but there remains a requirement to ensure mortalities don't affect waters of the state.

*Comment:* [327 IAC 19-7-6](#). We assume that incineration will continue to be authorized, and that the temporary storage is available for animals to be picked up for rendering. Thus, to the extent IDEM intends to regulate incineration, those provisions should be included within this rule. (LPRRG)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6\(b\)\(1\)](#). It is more appropriate for the rule proposal to delineate those soil types where burial is not allowed. It would appear that the list in (c)(3) meets this purpose. IDEM should ensure that this list is complete and eliminate the provision in 6(b)(1) respecting soils which inhibit leaching. (LPRRG)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6\(c\)\(1\)](#). Requiring setbacks of 300 feet from potentially ponded areas greatly reduces the area for burial without providing any environmental benefit. According to BOAH regulations, animals



must be buried six feet below the surface. It is not at all clear how a burial four feet below the surface could contaminate surface water. We also suggest that the setback from water wells should be from drinking water wells for human consumption. (LPRRG)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6\(c\)\(2\)](#). "Adjacent" should be clearly defined. Otherwise, questions will arise as to how many feet should be between a disposal site and a tile before it is considered adjacent. We suggest that the provision require burial sites be at least 10 feet from known tiles. (LPRRG)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6\(c\)\(3\)](#). We suggest that the sentence be modified by adding "unless a plan is developed to prevent groundwater contamination" after "SC." (LPRRG)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6\(d\)\(1\)](#). "Water wells" should be limited to "drinking water wells for human consumption." Property lines, to the extent the provision exists to provide protection for water quality, should focus on "property lines of adjoining landowners." (LPRRG)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6\(d\)\(2\)](#). The provision should be revised to state that the facility should "be constructed and operated to prevent leachate from getting into ground or surface water." (LPRRG)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6\(d\)\(3\)](#). This should be rewritten to state that it should be constructed and operated in a manner to control run-on and run-off to prevent contamination of surface water by process wastewater. (LPRRG)

*Response:* IDEM has made significant revisions to mortality management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-7-6\(d\)\(4\)](#). We are opposed to submit a mortality management plan to IDEM. The construction parameters such as setback and design of facilities will be part of the application. Any additional requirements for disposal are addressed by BOAH's rules and this rule should not contain provisions which usurp BOAH's authority to regulate dead animal disposal. (LPRRG)

*Response:* IDEM agrees that mortality management is best left to BOAH. Therefore, a plan is no longer required, but there remains a requirement to ensure mortalities don't affect waters of the state.

*Comment:* Producers should not be required to submit names or plot plans of owners of manure land application areas, since this is not required for farmers who apply pesticides, herbicides and other petrochemicals. (TMC)

*Response:* IDEM disagrees and notes that the distinction is that manure is applied both as a nutrient, and as a method to manage the manure that is generated from animal agriculture, which is not the case with pesticides, herbicides or chemical fertilizers. Knowing the names and plot where manure may be applied allows IDEM to verify that each owner/operator is maintaining sufficient acreage to be able to properly manage the amount of manure generated.

*Comment:* Acreage requirements should be held to a minimum, and it should be easier to apply on acreage that is not in the original or amended permit. These requirements limit the number of acres where manure is applied, driving up phosphorus levels in permitted acreage. (MSD)

*Response:* The intent of acreage requirements is to assure that there is sufficient land to absorb the manure generated such that the manure will not be overapplied.

## **Rule 8. Approval Process**

*Comment:* [327 IAC 19-8-1](#). ". . .revoked, and reissued, or revoked. . ." – the extra comma should be removed so that it reads as ". . .revoked and reissued, or revoked. . ." (KJM)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-8-1](#). We think it is more appropriate that the renewal begin on the day that the previous approval expired so that each subsequent renewal stays five years rather than some shorter duration. (LPRRG)

*Response:* IDEM has deleted the term "approval renewal" from this section. Historically IDEM has made the permit issued expire 5 years from the issuance date in order to assure the statute that requires permits to not be longer than 5 years was not being violated.

*Comment:* [327 IAC 19-8-2](#). This section only provides 30 days for IDEM to review the permit renewal application before the permit expires. This time frame should be at least 60 days prior to permit expiration. (KJM)

*Response:* In the current CFO rule, there is no requirement to submit prior to the actual expiration date and 30 days has always been sufficient in the past to process complete renewal applications.

*Comment:* [327 IAC 19-8-2](#). IDEM should have a requirement that addresses those facilities that want their permit renewed but that have a history of repetitive non-compliance and/or are currently grossly out of compliance. There should also be some language that addresses those facilities that are in bankruptcy and seriously non-compliant. (KJM)

*Response:* Non-compliant facilities will be dealt with on a case-by-case basis by IDEM's compliance staff. The rule provides for the revocation of a permit for non-compliant facilities which would be more appropriately used after a repeated demonstration of non-compliance instead of waiting until it is time to renew the permit.

*Comment:* [327 IAC 19-8-2](#)(b). We suggest that the third sentence be revised to state, "A confined feeding operation that has been subject to an enforcement action by the department pursuant to [IC 13-30-3](#) for a discharge within the previous five (5) years shall be subject. . ." Likewise, we suggest that the last sentence of the paragraph should be revised to state, "A confined feeding operation that has not been subject to an enforcement action by the department pursuant to [IC 13-30-3](#) for a discharge within the previous five (5) years shall be considered. . ." (LPRRG)

*Response:* IDEM has deleted both of those sentences in the revised draft language.

*Comment:* [327 IAC 19-8-2](#)(c). The permittee should submit a list of all spills that occurred in the five year permit period and provide a narrative of why the spills occurred, what was done on the site to remediate the spill impacts and what measures were taken to prevent the spill from occurring again. The renewal process should be used to convey to the public/department that the permittee fully understood the requirements during the past five years and has made improvements to the waste management system in a timely manner. (KJM)

*Response:* CFOs already notify the department of any spills and actions taken to correct the problems.

*Comment:* [327 IAC 19-8-2](#)(c). We suggest that the only information which should be required to be submitted is information which has changed from the previous approval. We also oppose the requirement to maintain available acreage for the manure or litter which is not applied by the confined feeding operation but is transferred to another party. (LPRRG)

*Response:* Several revisions have been made to this subsection. It has been a recurring problem that CFOs do not update their farmstead plans; therefore that provision will remain.

*Comment:* [327 IAC 19-8-2](#)(c)(3). This is confusing as written and should be reworded. We suggest that it state that, "Updated information if any information required by [327 IAC 19-7-1](#)(c) has changed from the original application or a previous renewal." (LPRRG)

*Response:* This provision has been deleted.

*Comment:* [327 IAC 19-8-2](#)(c)(4). If the farmstead plan has not changed from the original approved permit, we contend that a new one is not needed for the renewal. (PU)

*Response:* It has been a recurring problem that CFOs do not update their farmstead plans. Requiring it to be updated as part of the renewal will help assure that the owner/operator reviews the relevant conditions at their farm.

*Comment:* [327 IAC 19-8-3](#)(a)(3). We suggest that an amendment should only be needed if the capacity were reduced by a certain percentage, such as ten percent from the most recent approval. (LPRRG)

*Response:* This language was changed to match [327 IAC 19-6-1](#)(c).

*Comment:* [327 IAC 19-8-3](#)(b). Further clarification is needed for what constitutes "any changes to the operation as approved." Written reasons for why an amendment is required should be provided by the department. (LPRRG)

*Response:* This provision means that if there are any changes to any information included in the current approval and the application information provided to obtain the approval, the CFO must notify IDEM.

*Comment:* [327 IAC 19-8-4](#). The language in section (4)(a) is not clear; is the intent of the language to deny a permit application after failure to address at least two deficiency letters? (KJM)

*Response:* Yes, that is the intent.

*Comment:* [327 IAC 19-8-4](#). There must be a public notice and due process mechanism in the permit transfer rule so that adjacent landowners and concerned public can comment on the viability of the new owner/permittee to operate the facility and to insure that the good character provision is tested. (KJM)

*Response:* This is currently beyond the statutory authority granted to IDEM.

*Comment:* A person proposing ownership by transfer of a facility should be required to meet the good character rules. (JJH) (BSC) (AJH) (KP) (FD) (ECCRC)

*Response:* The good character requirements for CFOs derives from [IC 13-18-10-1](#) and [IC 13-18-10-1.4](#) and applies to any person proposing to construct a CFO or expand a CFO to increase animal capacity or manure containment capacity or both. It does not apply to a person purchasing an existing facility that does not involve construction or expansion of the facility.

*Comment:* [327 IAC 19-8-4](#)(a)(1). We take this to mean that an application will be denied if the application reveals that the confined feeding operation will not be designed and/or operated in such a manner as to meet the requirements of the confined feeding rule. However, we do not believe that the rule is clear in this regard. (LPRRG)

*Response:* Yes, that is what is intended.

*Comment:* [327 IAC 19-8-4\(a\)\(2\)](#). We suggest that the language be revised to state, "Submit a complete application after receipt of two notices **of the same deficiency** on the new or renewal application." (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-8-5](#). We suggest that the language in [327 IAC 19-8-5](#) state "as a result of a violation that results in substantial impacts to human health or the environment." (LPRRG)

*Response:* Revocation language comes directly from [IC 13-18-10-2.1](#).

*Comment:* [327 IAC 19-8-6](#). We suggest that the opening clause in [327 IAC 19-8-6\(a\)](#) be deleted and the sentence be revised to "Prior to transfer of the ownership of a CFO, the parties. . . (1) the anticipated date of transfer. . ." We propose that a new subsection (b) be created which requires that actual notice of the date of closing and assumption of responsibilities will be provided within ten days of the closing. (LPRRG)

*Response:* IDEM has added language indicating the request must be submitted within 90 days of the transfer. The date of transfer of responsibilities is entirely up to the parties involved in the transfer.

*Comment:* [327 IAC 19-8-7](#). Public notice should be published and appropriate signage should be displayed on the land prior to construction. Notice should also be sent to all adjacent landowners and occupants. Public comments should be allowed from anyone in the community. (HEC) (CLC) (SC) (CAC)

*Response:* The legislature was very specific in establishing the notice requirements under [IC 13-18-10-2\(b\)](#); it is beyond IDEM's authority to require anything more.

*Comment:* Public hearings are important and should be continued in the rules. (JJH) (BSC) (AJH) (KP) (ECCRC)

*Response:* The CFO rules allow for public meetings in instances where the commissioner determines that they are warranted based on issues and concerns raised during public comment periods.

*Comment:* [327 IAC 19-8-7\(a\)](#). We do not believe that the notice should be required to be provided to neighbors on a state form. Rather, we feel that applicants should be able to provide their own letter as notification so long as all pertinent information is included. The last sentence should be revised to state that an affidavit must be filed that certifies that the applicant will comply with the requirements. As currently written, this language requires the affidavit to be submitted before the time period expires for notice to be given to the appropriate parties. (LPRRG)

*Response:* IDEM is in no way stopping applicants from providing their own letter as long as they also provide notice on a state form which will ensure information, such as comment period timeframes, is consistently shared with neighbors. The affidavit language comes directly from [IC 13-18-10-2\(b\)](#).

*Comment:* [327 IAC 19-8-7\(b\)](#). If the Administrative Orders and Procedures Act deems fifteen days an appropriate length of time to submit a written petition for review of an order, it is surely sufficient for collecting public comment on a CFO application. Even if IDEM deems fifteen days inadequate, forty days is still too long. (LPRRG)

*Response:* IDEM has changed the comment period to 33 days from the date the required notice is mailed to the neighbors by the applicant.

## **Rule 9. Operating Record**

*Comment:* [327 IAC 19-9-1\(b\)\(14\)](#). The provision in [327 IAC 19-9-1\(b\)\(14\)](#) is not written as a record which must be kept but instead is a command for a certain action to be taken. (LPRRG)

*Response:* This provision has been deleted from this section and is included under the manure management plan.

*Comment:* [327 IAC 19-9-1\(b\)\(14\)](#). We suggest clarifying this statement or deleting "and to minimize nutrient leaching" because fertilizer recommendations were not specifically designed to minimize nutrient leaching. (PU) (LPRRG)

*Response:* This provision has been deleted from this section and is included under the manure management plan.

*Comment:* [327 IAC 19-9-1\(b\)\(16\)](#). This should be simplified to state, "Copies of any written waivers reducing the setback distances." (LPRRG)

*Response:* IDEM believes the provision is clear as written.

*Comment:* Farmers should not be required to copy and submit records to IDEM. IDEM should make on site farm reviews of the records. (TMC) (MSD)

*Response:* Many records are required to be kept on-site for inspections. However, several of the records are required to be submitted to IDEM as part of permit applications and renewals.

*Comment:* Operators should be required to submit reports on manure applications to IDEM at least twice a year. They should identify their land application sites and in December report where, when and how much manure they applied. The reports should be posted to the virtual file cabinet. (JJH) (BSC) (AJH) (ECCRC)

*Response:* IDEM believes the operating record kept on the farm site is the appropriate place to maintain the information discussed above. If kept on-site, it is available for inspectors to review during farm inspections to assure that such records are up-to-date and actually comport with ongoing activities at the facility.

*Comment:* Land application records are kept in the operating record on-site for inspection by IDEM staff. How often are these records inspected, and how would IDEM staff know if the records are falsified? (ML)

*Response:* Criminal violations apply to any falsification of records and as with any inspection program, records must be checked to assure accuracy and veracity. Records are inspected each time the facility is inspected. Operational issues or conflicts within records that are identified during an inspection are thoroughly investigated to determine the source of the conflict.

#### **Rule 10. Ground Water Monitoring**

*Comment:* [327 IAC 19-10-1](#). We cannot support any ground water monitoring requirements, whether as a condition of this rule or at the discretion of the commissioner, unless the conditions which will trigger the requirement are clearly delineated in this rule. We suggest that the requirement for monitoring should be related to geologic or design criteria which indicate that ground water contamination is an actual concern. (LPRRG) (T & M) (TMC)

*Response:* It would be impossible to list every possible site-specific condition that could trigger the need for ground water monitoring. IDEM agrees that geologic or design criteria would be the main concerns for ground water contamination.

*Comment:* [327 IAC 19-10-1](#). Use of the phrase "All CFOs required to conduct ground water monitoring must. . ." is unclear as to whether "All CFOs" or "CFOs with a particular site risk or spill history" are needed to conduct ground water monitoring. (PU)

*Response:* IDEM has added language pointing to [327 IAC 19-4-1\(c\)](#). This should clarify that only CFOs with site specific concerns for ground water contamination would be required to perform monitoring.

*Comment:* [327 IAC 19-10-1](#). There is no specification as to "where" to test relative to the production and storage areas. Use of "statistical determinations" and "statistically significant increases" are highly dependent on number of tests to determine baseline. Requiring the producer to do this is illogical. (PU)

*Response:* This concern would be best addressed through guidance.

*Comment:* [327 IAC 19-10-1](#). We suggest that when monitoring is required that one or two indicators be monitored, such as "field specific conductance." With respect to the other monitoring parameters, we do not believe that there is any reason to check for phosphate levels as the likelihood of leaching to ground water is extremely minimal. (LPRRG)

*Response:* The monitoring parameters, other than field specific conductance and field pH, were selected based on constituents that occur in manure, and are indicative to a manure storage facility potentially leaking into the underlying ground water. Field pH and field specific conductance have been included as parameters since they are necessary to monitor while purging a monitoring well to determine ground water stability prior to sampling.

*Comment:* [327 IAC 19-10-1](#). Timing of monitoring is also inconsistent versus that for storm-water monitoring. Regarding the monitoring parameters listed, analyses for field pH and conductance will not add any particular water quality implication. Measurement of phosphate and sulfate are not direct indicators of a potential to impact human health. (PU)

*Response:* Timing of ground water monitoring versus storm water monitoring would be best addressed through guidance. Field pH and field specific conductance have been included as parameters since they are necessary to monitor while purging a monitoring well to determine ground water stability prior to sampling. Though phosphate and sulfate do not have maximum contaminant levels (MCLs), they are specific to the waste, and therefore have been selected as indicator monitoring parameters. Sulfate does have a secondary contaminant level of 250 mg/l.

*Comment:* [327 IAC 19-10-1](#). Without having representative background samples, subsequent sampling will be inadequate to provide any relevant information as to whether the confined feeding operation may be causing groundwater contamination. We also do not believe that it will be feasible for a farmer to determine whether or not there has been a statistically significant increase over background levels. We also believe that ground water monitoring results should be submitted just one time per year. (LPRRG)

*Response:* For new facilities subject to ground water monitoring requirements, representative background samples prior to population have historically been required through site specific plans developed by applicants themselves. IDEM has consistently required facilities through these plans to submit ground water results in a timely fashion after the monitoring event to ensure IDEM's prompt notification in case of any possible contamination event. The inclusion of these requirements into rule is an effort to standardize permit conditions already currently implemented through policy. Concerns regarding the feasibility of farmers to determine statistically significant increases would be best addressed through guidance.

*Comment:* [327 IAC 19-10-1\(b\)\(3\)\(i\)](#). List should include total dissolved solids (TDS) and total Kjeldahl nitrogen (TKN). (KJM)

*Response:* Total dissolved solid is too generic to be used as an indicator parameter, and may not be indicative of ground water contamination originating from a manure storage facility. The monitoring parameters list will be modified to include total Kjeldahl nitrogen (TKN), while ammonia-N and nitrate-N will be removed (see below):

(A) monitoring parameters, including:

(i) field pH;



- (ii) field specific conductance;
- (iii) total Kjeldahl nitrogen;
- (iv) chloride;
- (v) fecal coliform bacteria;
- (vi) phosphate;
- (vii) sulfate; and
- (viii) total organic carbon;

(Note: According to staff chemist, total Kjeldahl nitrogen (TKN) is the sum of organic nitrogen, ammonia ( $\text{NH}_3$ ), and ammonium ( $\text{NH}_4^+$ ) in the chemical analysis of soil, water, or wastewater (e.g. sewage treatment plant effluent). The parameter test itself is apparently less expensive, while also reducing the parameter list by one.)

*Comment:* [327 IAC 19-10-1](#)(b)(3)(i). The proposed rule should be rewritten to require or allow the use of confirmation testing when initial positive results are obtained. (SDS)

*Response:* Ground water monitoring requirements are implemented on a case- by-case basis and require the submittal of a ground water monitoring plan with may include such confirmation testing requirements as part of the plan. Each plan must be approved by the department after development by the owner or operator when ground water monitoring is deemed necessary.

*Comment:* [327 IAC 19-10-1](#)(b)(3)(i). Annual sampling has minimal fiscal impact. Several sampling events per year will result in a financial burden. The rule language is open ended and does not provide certainty regarding sampling frequency. (SDS) (MJMcC)

*Response:* The language is open ended because ground water monitoring requirements are extremely site-specific and are implemented on a case-by-case basis. Sampling frequency is a component of the written plan that must be submitted to and approved by the department.

*Comment:* [327 IAC 19-10-1](#)(c). Is IDEM asking the permittee to perform non-parametric statistical analysis; and if so, how many permittees are sufficiently trained in statistics to make a judgment on a statistical increase? Assuming the permittee will hire someone to perform the statistical analysis – that person should be identified with respect to qualifications and a narrative should be provided that describes what statistical methods were used, why they were used, and the reliability of the findings. (KJM) (SDS)

*Response:* This concern would be best addressed through guidance.

*Comment:* [327 IAC 19-10-1](#)(c). A risk assessment should be conducted prior to any corrective action being ordered. (LPRRG)

*Response:* (c) states the department "may" require corrective action. Appropriate assessments would come before the department takes action.

*Comment:* [327 IAC 19-10-1](#)(c). The language is too open ended regarding sampling frequency, test equipment and fiscal impact. Impacts to ground water can be caused by a variety of sources unrelated to the CFO. The proposed rule does not help the CFO to positively identify the source of all statistically significant increases. Submitting water quality data as a public record will result in speculative enforcement not based on science. Water quality data should be maintained at the CFO as a private record. No change is necessary. (SDS) (MJMcC)

*Response:* IDEM disagrees that water quality data should be maintained as a private record. Very few instances of ground water monitoring at CFOs have been required by IDEM and each requires a very site-specific plan that will identify an alternative source of contamination, if one exists, hence the reason the rule requires a plan to be developed based on the site.

#### **Rule 11. Storm Water Pollution Prevention Plan**

*Comment:* [327 IAC 19-11-2](#)(4)(B). Most raw materials are delivered covered or in containers, so how is inclusion of access roads and rail lines protective of water quality? What is the extent of "immediate" and how it may be interpreted? Definition of the term "refuse" sites must be clarified and examples given within the guidance document. Rationale is also needed to justify why the vehicle storage areas are relevant to this rule. (PU)

*Response:* This language comes directly from federal storm water management rules and mirrors current IDEM storm water guidance, now being incorporated into rule for consistency.

*Comment:* [327 IAC 19-11-2](#)(4)(C)(vi). The phrase "solid or fluid wastes" is used. We do not believe that this is referring to "solid wastes" as defined in [IC 13-11-2-205](#). Nor is it clear exactly what is meant by "fluid wastes." We anticipate that it is referring to nothing more than waste material in a liquid form. However, we urge that this provision be reworded so that there are no uncertainties about the types of products being discussed. (LPRRG)

*Response:* This language comes directly from federal storm water management rules and mirrors current IDEM storm water guidance, now being incorporated into rule for consistency.

*Comment:* [327 IAC 19-11-2](#)(4)(C)(vi). This statement is confusing if discharge is not allowed. IDEM should remove "other than by discharge". (PU)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* Storm water monitoring is neither practical nor reasonably enforceable. If managed with an approved plan, monitoring should not be required, unless under specific conditions which should be stipulated by IDEM. (PU)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-11-1](#). We suggest that greater benefit would be seen by requiring that best management practices be utilized to address storm water issues rather than to require extensive storm water management plans which are expensive to create and which require extensive documentation and explanation for pollutants which are not extremely harmful and which are fully known and anticipated to be present in small quantities on the production area. (LPRRG)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-11-1](#). The types of pollutants potentially present are not those that are unduly dangerous to individuals. The impacts from storm water runoff from a livestock or poultry farm are likely to be minimal with some potentially small impacts to aquatic life. The real concern is for spill events which may discharge large quantities of pollutants that may kill fish or other aquatic life. Those events are not addressed with a SWP3. (LPRRG)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language. Large CAFOs, regardless of the CFO rule, are required to comply with 40 CFR 122.23(e) as applicable. CFOs will have to keep a storm water management certification in their operating record verifying implementation of best management practices.

*Comment:* [327 IAC 19-11-1](#)(b). The use of "periodically" is vague and any requirement for review should be "annual." (LPRRG)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-11-1](#)(c)(3). This provision is vague and/or inconsistent. We suggest that a new subsection (d) be created with three categories: (1) newly constructed CFOs which must comply prior to populating, (2) existing CFOs which must comply within 180 days of the effective date of the rule, and (3) facilities in existence which become a CFO must comply within 180 days of becoming a CFO. (LPRRG)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language. At a minimum there will be three months between final adoption by the board and the effective date of this rule for existing facilities to achieve compliance with these provisions.

*Comment:* [327 IAC 19-11-1](#) and [327 IAC 19-11-2](#). The stormwater pollution prevention plan should include all provisions employed at land application sites to reduce and minimize contaminated stormwater runoff during storage/staging of manure and during the land application of manure/wastewater. Where does the rule address the discharge of contaminated groundwater to the surface from lagoon perimeter tiles? (KJM)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-11-2](#). The information gathered from monitoring can indicate that a problem exists, but it does not show the cause of the elevated levels of pollutants. Total suspended solids, ammonia and biological oxygen demand can all be found to be at high levels with no fault of the livestock operation. Pollutants can come from different sources and ammonia levels can be high because of air deposition. (LPRRG)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-11-2](#). The rule needs a definition for "storm water outfall" and we suggest removing TSS as it does not have a direct environmental impact (e.g. if there was more sand in the sample, this would increase TSS). We also suggest that IDEM insert wording to allow a discharge if it is able to attain certain quantifiable concentrations (e.g., a specific COD). Additionally, measurement of BOD is expensive (approximately \$30 to \$40/sample) and relatively inaccurate as it is a microbial bioassay. We suggest if monitoring is to be used, that COD is a better indicator of oxidation capacity of organic matter and a much more accurate measure. (PU)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-11-2](#). IDEM should allow for treatment systems (e.g. filtration strips) prior to release from the production area. Storm water capture structures and grading will result in substantial cost to the operation and plausibly sets the operation up for failure during significant rainfall events. IDEM is requiring either additional earthen storage facilities for storm water runoff, or placing additional burden for storm water collection and storage into existing manure storage structures. (PU)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-11-2](#)(6)(B). The parameters should include Total Kjeldahl Nitrogen (TKN) and nitrate-nitrogen. The inclusion of ammonia-nitrogen (NH<sub>4</sub><sup>+</sup>) is volatile and would not represent all forms of nitrogen (e.g., silage leachate nitrogen is in the form of nitrates). (KJM)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-11-2](#)(6)(B). Which BOD is being required – carbonaceous or ultimate or both? It might be prudent to include field pH as a parameter as well as total organic carbon (TOC). (KJM)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-11-3](#)(a)(1). As written, it currently requires an amendment whenever a change "has the potential to have a significant effect on the potential for the discharge of pollutants." There needs to be a risk that is more concrete than the potential to increase the potential for a discharge. (LPRRG)

*Response:* IDEM has made significant revisions to storm water management requirements. Please refer to the new draft language.

*Comment:* Best practices of diversions and infiltration areas are already included in the design of livestock operations and should be promoted by IDEM rather than imposing another costly plan that controls an insignificant contribution to any potential water pollution. (TMC)

*Response:* There is no costly plan imposed by this rule. The rule requires all CFOS to consider a list of potential storm water-related issues that may help each CFO plan for storm water issues before they arise. As livestock operations expand and change over the years, designed diversions and infiltration areas may change. Requiring an ongoing assessment and consideration of such issues is a good management practice and allows each CFO to tailor solutions to its individual operation.

*Comment:* Storm water management plan development is expensive and time-consuming. The average producer will have to hire a consultant to develop and maintain the plan. Most farms already have things in place to deal with storm water and runoff potential. (MSD)

*Response:* The rule does not require a written plan, per se, it merely requires the consideration of storm water issues and the implementation of certain storm water management practices such as preventive maintenance, self-monitoring inspections and sediment and erosion control. IDEM does not believe that considering and implementing these basic good management practices should require the hiring of a consultant.

## **Rule 12. Manure Handling and Storage; Site, Design, and Construction Requirements for Waste Management Systems**

*Comment:* If new standards are required to meet the regulations set forth by the Clean Water Act, all manure storage facilities should be required to adhere to the specified leakage rates and design standards. Existing manure storage facilities should submit to testing to determine whether they are in compliance with the new design standards. If the facilities are not in compliance, they should submit a plan to upgrade and/or relocate existing manure storage structures with manure management plan. The timeline for implementation of new requirements should not exceed the existing permit. Inspection of new or upgraded facilities should be required for permit renewal. Engineers that verify construction designs and implementation should be required to be licensed in Indiana. (HEC) (CLC) (SC) (CAC) (JJH) (BSC) (AJH) (KP) (FD)

*Response:* Requiring farms built decades ago to comply with current design and construction requirements is unnecessarily burdensome and would result in bankruptcy for many. The rules establish management practices to require older farms to be managed in a way that remains protective of the waters of the state. IDEM will require modifications to the design of any structure that poses an unacceptable risk to water quality. The definition of "registered professional engineer" includes being registered in Indiana.

*Comment:* [327 IAC 19-12-1](#). In the introductory sentence, the word "must" should be "shall" to emphasize the importance of the site restrictions. (KJM)

*Response:* In this case, the word "must" is used correctly in that it is stating as a fact that waste management systems are not to be constructed except in accordance with the rule. This is considered using the indicative mood of the verb and such mood is the preferred method of rule writing in accordance with the legislative and administrative rules drafting manuals put together by legislative services.

*Comment:* [327 IAC 19-12-1](#). The provisions in [327 IAC 19-12-1](#) are acceptable requirements with the exception of (4), which prohibits construction over mines. While (b) allows for additional information to be shown to allow for construction in karst terrain, no similar provision exists for any of the other categories. We also suggest that if the commissioner is going to require additional information to allow for construction in karst terrain that the request for information should be in writing and details should be provided on why the information is needed. (LPRRG)

*Response:* NRCS and Ohio have the same restrictions and IDEM feels that the prohibition of construction over mines is important to ensure water quality. The information about karst is needed because it is a well established sensitive area that increases the risk of water quality violations. Producers intending to construct in karst terrain should be prepared to take extra measures to ensure protection of human health and the environment.

*Comment:* [327 IAC 19-12-1](#)(a)(3). This rule language allows construction below flood level if the access doors (to the barns, presumably) are two feet above the flood level. Several CAFOs have been proposed to IDEM using this exact reconciliation (i.e., that the barn doors are above the flood level) yet completely ignoring the negative impacts to the pit wall integrity such flooded conditions would impose. During a flood, the entire soil column would be saturated and there would be a significant threat of structural integrity. Best to not allow

construction of below ground manure storage in those flood zones, period. (KJM)

*Response:* IDEM feels that the language currently in the draft rule, specifically "structurally sound without lowering flood waters or the seasonal water table below the bottom of the waste management system" is sufficient to protect from floods.

*Comment:* [327 IAC 19-12-1](#)(a)(3): Since this provision addresses flood plains and flood water the following change is proposed:

(3) in a one hundred (100) year flood plain, unless all waste management system access is at least two (2) feet above the one hundred (100) year flood plain and structurally sound without lowering **flood waters or the seasonal water table below the bottom of the waste management system**; (MV)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-12-1](#)(a)(5): The following change is proposed:

(5) in soil **types** that **are** is expected to **have a be in the** seasonal high water table, unless the water table is lowered to keep the water table below the bottom of the waste management system; (MV)

*Response:* IDEM agrees with this comment and has revised the language

*Comment:* [327 IAC 19-12-1](#)(b): A review of [327 IAC 19-12-1](#)(b) and [327 IAC 19-7-1](#)(c)(7) and the interaction between these two provisions are confusing. To provide clearer specifications and requirements is proposed to separate the requirements for non-karst terrain areas from karst terrain areas in the rule and specifically address each individually. (MV)

*Response:* IDEM has changed the reference in [327 IAC 19-7-1](#)(c)(7) to clarify the meaning.

*Comment:* [327 IAC 19-12-1](#)(b)(3). The use of earthen storage should be prohibited in karst terrain. Only aboveground tank storage with secondary spill containment should be allowed in karst areas. (KJM)

*Response:* IDEM believes that construction may be safely allowed in karst terrain as long as the conditions listed in the draft rule are met. A blanket prohibition is unnecessarily restrictive.

*Comment:* [327 IAC 19-12-2](#). Surface water is all water present on the surface of the earth, which would seem to include ponded and diffuse flowing water from a storm. We do not know how someone could guarantee that the facility would always be 300 feet away from such surface waters. We also believe that 300 feet away from any surface water is excessive. (LPRRG)

*Response:* This provision is from the current [327 IAC 16](#) and IDEM is unaware of any instances where someone tried to enforce a 300 foot setback from a puddle. IDEM disagrees that a 300 foot setback is excessive.

*Comment:* [327 IAC 19-12-2](#). Setbacks to public water supplies should be at least one mile, not a mere 1000 feet. Setbacks to residential buildings should be a minimum of 1250 feet and should increase as the size of the CAFO increases with setbacks of quarter mile increments per every 1000 animal units. Setbacks for solid manure should also include a sliding scale that increases with number of animal units. The setback for a 1000 head feedlot should be different than that required for a 10,000 head feedlot or even a 100,000 head feedlot. (KJM)

*Response:* This provision is from the current [327 IAC 16](#) and IDEM believes that the current setbacks have been sufficient to protect the waters of the state.

*Comment:* [327 IAC 19-12-2](#). The proposed setbacks must be under the control of the permittee and not include any land that is considered off-property to the CAFO. It is insulting to the adjacent landowner to use their property to satisfy a setback to homes and water wells. It is also a takings to imply that the setback only apply to existing structures. The rule must also include setbacks to the facility water well that are as protective as for off-site water wells. (KJM)

*Response:* This provision is from the current [327 IAC 16](#) and IDEM believes that the current setbacks have been sufficient to protect the waters of the state.

*Comment:* [327 IAC 19-12-2](#)(b)(1) should be revised to require a minimum setback of one thousand five hundred (1,500) feet from a public water supply well or public water supply surface intake structure; and (2) [327 IAC 19-12-2](#) (b)(2) should be revised to require a minimum setback of five hundred (500) feet from surface waters of the state, drainage inlets, including water and sediment control basins, sinkholes, as measured from the surficial opening or the lowest point of the feature, and off-site water wells. [327 IAC 19-12-2](#) should be revised to require a minimum setback of five hundred (500) feet from the features described in [327 IAC 19-12-2](#) (b)(2) for manure storage facilities that contain solids. (HEC) (CLC) (SC) (CAC)

*Response:* This provision is from the current [327 IAC 16](#) and IDEM believes that the current setbacks have been sufficient to protect the waters of the state.

*Comment:* [327 IAC 19-12-2](#)(b) It is proposed that 19-12-2(b) be updated as follows.

(b) Waste management systems must be located to maintain the minimum setback distances from the following features that are known and identifiable at the time **an application is submitted for approval**:

(1) One thousand (1,000) feet from a public water supply well or public water supply surface intake structure.

(2) Except for subsection (c), three hundred (300) feet from:

(A) surface waters of the state;

(B) drainage inlets, including water and sediment control basins;

(C) sinkholes, as measured from the surficial opening or the lowest point of the feature; and



- ~~(D) off-site water wells.~~  
(3) Four hundred (400) feet from existing off-site residential and public buildings.  
(4) **(3)** One hundred (100) feet from:  
    (A) on-site **and off-site** water wells;  
    (B) property lines; and  
    (C) public roads. (MV)

*Response:* This language has been moved to [327 IAC 19-12-3](#) and some amendments conforming to the suggestion have been made. However, the 400 setback from off-site residential and public buildings remains in the rule.

*Comment:* [327 IAC 19-12-2](#)(b)(3). The decision to create a setback from off-site residential and public buildings is a decision appropriately addressed through zoning. It is not within IDEM's purview to include such a requirement when there is no connection to water quality concerns. (LPRRG)

*Response:* IDEM believes it is prudent to maintain the setback for several reasons, including providing the operator with enough space and time to appropriately respond to a release of manure to ensure it does not reach a residential or public building. As with all setbacks, the distance may be reduced if the owner/operator can demonstrate to the satisfaction of the commissioner that a different compliance approach would achieve the same goals as the rule language.

*Comment:* [327 IAC 19-12-2](#)(c). The following change is proposed:

(c) A manure storage facility **used to store solid manure** ~~that contains solids~~ must be **located to** maintained to have a minimum setback of one hundred (100) feet from the features in ~~subdivision~~ **subsection** (b)(2) of this section. (MV)

*Response:* IDEM believes that the language currently in the draft rule better captures the intent to regulate storage facilities that contain solids.

*Comment:* [327 IAC 19-12-2](#)(d): Based on my interpretation, the following is proposed in place of [327 IAC 19-12-2](#)(d) in the draft rule:

(d) If a feature identified in subsection (b)(2) of this section is constructed or changed to be located within the required setback distances to an existing waste management system, a new waste management system may be constructed to maintain the same setback between the existing waste management system and the feature, providing that:

- (1) the feature was not under the control of the owner/operator of the confined feeding operation; and
- (2) the feature was constructed or changed after the application for approval for the existing waste management system was submitted to the department. (MV)

*Response:* IDEM agrees with this comment and has revised some of the language in the draft rule.

*Comment:* [327 IAC 19-12-3](#). We suggest that this subsection clarify that those operations do not have to increase their storage capacity to 180 days unless they expand their operation by constructing new buildings or manure storage structures. (LPRRG)

*Response:* IDEM agrees with this comment and has added an applicability section to Rule 12.

*Comment:* [327 IAC 19-12-4](#)(f). The requirement to provide fourteen days notice is difficult in many circumstances and seems excessive for some of the simple construction tasks which take place – flexibility is needed. (LPRRG)

*Response:* IDEM agrees with this comment and has changed the notice to 2 days.

*Comment:* [327 IAC 19-12-3](#)(a). The prescriptive list is unnecessary and potentially too restrictive for some situations while being too inclusive for others. We suggest that (a) be revised to require that the storage capacity include all manure and other waste liquids which will be diverted to the structure. (LPRRG)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3](#)(a): definitions that clearly describe waste from cooling systems, water tank wastes, net average rainfall, and normal runoff are needed to be able to correctly implement the rule. (MV)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3](#)(a). Net average rainfall must include snowmelt specifically. (KJM)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3](#)(a)(7). Definition is needed here for "normal run-off". (PU)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3](#)(a). Facilities with manure storage structures built under previous permits should be allowed to maintain their structures with the storage capacity as originally permitted. The working should be changed to read: "All **new** manure storage facilities. . .". (SDS)

*Response:* Facilities with existing waste management structures are able to maintain those structures as originally permitted. If a feature is constructed after the original waste management system was submitted to the

department, the setback distances would be based on the original approval. Language at [327 IAC 19-12-2\(d\)](#) has been amended to clarify this.

*Comment:* [327 IAC 19-12-3\(a\)\(8\)](#). This would seem to be more appropriately combined with (b)(2) to discuss the twenty-four hour, twenty-five year storm events as part of one provision since the two subsections seem to overlap. (LPRRG)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3\(c\)](#). Should this be "precipitation" rather than "run-off"? We refer to our previous comments that release of storm water from the production facility should be allowed after proper treatment (e.g. filtration strips), thus not placing additional burden and setting the facility up for plausible failure of existing manure storage facilities. (PU)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3\(c\)](#). It is proposed that the recording of the available freeboard and documentation in the operating record be deleted from this provision and included in the requirements outlined for the operating record. The following changes are proposed to [327 IAC 19-12-3\(c\)](#):

(c) For any uncovered manure storage facilities, the design must include a minimum of two (2) feet of freeboard, measured from the lowest point of the top of the manure storage facility, to include the expected precipitation from a twenty-five (25) year, twenty-four (24) hour precipitation event that falls directly on the **surface area of the manure storage facility**. ~~draining into the structure~~. Manure storage facilities must have clearly identified markers to indicate the required freeboard and ~~that the required~~ freeboard must be maintained. ~~recorded, and kept in the operating record~~. (MV)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3\(d\)](#). The following changes are proposed:

(d) Manure storage facilities **that are earthen or utilize an earthen base** may not be constructed in sand or gravel soils (Unified Soil Classification: ~~of Pt~~, GW, GP, GM, GC, SW, SP, SM, SC), unless specially designed with an approved liner, in accordance with section 5 of this rule. (MV) (LPRRG)

*Response:* This requirement is from the original [327 IAC 16](#). IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3\(e\)](#), [327 IAC 19-12-5\(b\)](#). The proposed rule does not allow use of a concrete liner for waste storage structures. Concrete liners should be allowed in the rule. (SDS)

*Response:* Indiana NRCS Conservation Practice Standard Code 313, incorporated into the rules at [327 IAC 19-12-4](#) allows for the use of concrete liners.

*Comment:* IDEM should regulate all manure storage for manure generated by CAFOs and CFOs. (ECCRC)

*Response:* IDEM regulates all manure storage for manure generated by CFOs on the site of the CFO, including staging of manure of sites used for land application of the manure. The CFO rules do not, however, regulate the use of all manure within the state. Manure spread on crop farms, for example, must be applied in accordance with requirements set forth by the Office of State Chemist, which has responsibility for regulating the application of herbicides, pesticides and chemical and non-chemical fertilizers within the state. IDEM's regulatory authority for this rule is limited to water quality issues related to the construction and operation of the actual CFO within the state as that term is defined at [IC 13-11-2-40](#).

*Comment:* [327 IAC 19-12-3\(e\)\(2\)](#). The following edit is proposed to better state the intent of this provision:

(e) The base of a manure storage facility must be above bedrock as follows:

(1) If not in karst terrain, the base must be at least two (2) feet above bedrock.

(2) If in karst terrain, the base must be at least five (5) feet above bedrock, unless additional **separation** distance is determined **to be required** by the commissioner based on information provided under section 1(b) of this rule. (MV)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3\(e\)\(4\)](#). In previous conversations and public meetings, IDEM has indicated that the agency would clarify any standard within the rule itself, rather than provide direct reference to a separate agency's document as is done here for the construction specifications. (PU) (MV)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

15 USC §272, Utilization of Consensus Technical Standards by Federal Agencies, states that: "All Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical standards as a means to carry out policy objectives or activities determined by the agencies and departments."

The only exception to this is if the standards are impractical or conflict with applicable laws, neither of which

are the case with this rulemaking. Therefore, if IDEM were to elect not to use industry standards, we would have to lay out extensive reasons as to why that decision was made.

In addition, [IC 13-18-10-4\(b\)](#) requires that standards are consistent with publications from animal industry specialists, postsecondary educational institution specialists, or governmental bodies. By referencing IN NRCS, Midwest Plan Service, and Purdue University guidance IDEM is making sure that design and construction requirements are scientifically based and universally accepted.

*Comment:* [327 IAC 19-12-3\(f\)](#). This provision of the draft rule is prescriptive, limited in its scope, and makes direct reference to date certain design manuals and specifications limiting the ability to include realistic design parameters and construction techniques during the duration of the rule. It is recommended that [327 IAC 19-12-3\(f\)](#) be deleted and [327 IAC 19-12-3](#) be reorganized. (MV) (LPRRG)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language. 15 USC §272, Utilization of Consensus Technical Standards by Federal Agencies, states that: "All Federal agencies and departments shall use technical standards that are developed or adopted by voluntary consensus standards bodies, using such technical standards as a means to carry out policy objectives or activities determined by the agencies and departments."

The only exception to this is if the standards are impractical or conflict with applicable laws, neither of which are the case with this rulemaking. Therefore, if IDEM were to elect not to use industry standards, we would have to lay out extensive reasons as to why that decision was made.

In addition, [IC 13-18-10-4\(b\)](#) requires that standards are consistent with publications from animal industry specialists, postsecondary educational institution specialists, or governmental bodies. By referencing IN NRCS, Midwest Plan Service, and Purdue University guidance IDEM is making sure that design and construction requirements are scientifically based and universally accepted.

The design standards listed in the draft rule are applicable only to new construction, meaning they are not retroactive. Hence, there will be no effect on existing structures; only future construction. Additionally, if the farm can provide a design that is equally protective of the environment, the department will review and consider it for approval.

*Comment:* [327 IAC 19-12-3\(f\)](#). The minimum separation distance should be 30 feet for non-karst bedrock and prohibition of belowground storage of waste in karst terrain. (KJM)

*Response:* Construction of waste management systems in karst terrain is prohibited unless the commissioner determines, based on site-specific information and soil boring data, that the design and construction specifications are sufficiently protective of the sensitive karst area. The commissioner may require additional measures to protect waters of the state under this rule should the individual situation merit it.

*Comment:* [327 IAC 19-12-3\(f\)](#). It would seem reasonable to expect that if a professional engineer's certification is required for all concrete manure storage facilities then it will not be necessary for IDEM to review the design and construction specifications as part of the approval process, therefore expediting the review process. An Indiana licensed professional engineer on the project should be required to certify that CFO and CAFO facilities and manure containment structures are built according to designs approved by IDEM. (MV) (LPRRG) (ECCRC) (ML)

*Response:* The rule has been modified to require the signature of a professional engineer registered in the State of Indiana upon completion of any manure storage structure. That certification is to be kept with the operating record.

*Comment:* [327 IAC 19-12-3\(f\)](#). [327 IAC 19-12-3\(f\)\(3\)](#) requires a minimum soil bearing capacity for all manure storage facilities of 2,000 pounds per square foot. Remembering that a manure storage facility includes any pad, pit, pond, lagoon, tank, building, or manure containment area it is not appropriate to establish design standards that are not practicable or applicable. This prescriptive approach to design is not sound, adds unnecessary costs, and limits and/or prohibits realistic designs in areas that do not meet these minimum requirements. (MV) (LPRRG)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3\(g\)](#). The rule must address the corrosion resistance of the concrete used to build manure structures. This is a problem that can be resolved simply by insisting on a better grade of concrete, generally one that includes Type V cement. The structures should not be made with cinderblock. There must be a mechanism to inspect the surface integrity of the concrete during operation to insure that the expected low permeability of the concrete is maintained throughout the operation of the manure storage facility. (KJM)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction. Specifically, the design requirements contained in Mid West Plan Service # 36, Concrete Manure Storage Handbook, discusses the possibility of acid attack on concrete in the manure storage structure.

*Comment:* [327 IAC 19-12-3\(g\)](#). This overlaps the requirements in [327 IAC 19-12-3\(a\)](#), specifically [327 IAC 19-12-3\(a\)\(6\)](#) and appears to be specific to liquid manure storage facilities. If this provision is specific to liquid

manure storage facilities then it needs to be clearly stated. (LPRRG)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-3\(h\)](#). Include a requirement that the commissioner must provide a written explanation when requiring testing of the manure storage facility. (LPRRG)

*Response:* IDEM has revised the rule to require the requested written explanation, see [327 IAC 19-4-1\(c\)](#).

*Comment:* [327 IAC 19-12-4\(a\)](#). We suggest this be revised to clarify that if the only discharge is of non-contact cooling water, an NPDES permit should only cover the non-contact cooling water and the manure management aspects of the production area should continue to be regulated under the CFO program. (LPRRG)

*Response:* IDEM is not going to require multiple permits within a facility when one permit will provide the necessary environmental protection. If a facility is discharging non-contact cooling water and the facility does not have a NPDES CAFO permit, depending on the size of the facility, IDEM would either designate the facility a CAFO or it would become one automatically by virtue of its size and discharge. The NPDES CAFO permit would then be required for the entire facility.

*Comment:* [327 IAC 19-12-4\(b\)](#). There can be many sources of ammonium-N in water, elevated levels should not automatically trigger a determination that a manure storage structure is leaking. Finally, the 50 feet requirement is not appropriate in all situations. Sampling points should be established on a case by case basis. (LPRRG)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-4\(c\)](#). We feel these parameters are overly restrictive. As written, they seem to even prohibit tying into an existing drainage tile. In (c)(3), the requirement for a back up pump is unnecessary so long as the operator has access to a separate pump that can be utilized in the event of failure of the primary pump. (LPRRG)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-4\(c\)\(4\)](#). The restriction that an outlet must be either twenty or fifty feet from a property line may be excessive if the water can be safely placed into a ditch or creek which is within the setback and will carry the water away. (LPRRG)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-12-4](#) and [327 IAC 19-12-5](#). We believe that these are largely overly restrictive, do not provide needed flexibility, and will provide no additional benefit to human health and the environment. We are opposed to the broadly applied and overly burdensome and costly requirement of having a professional engineer prepare a construction quality assurance plan for all manure storage facilities. This provision if maintained must be limited to only those manure storage facilities that require a liner and should only be addressed in [327 IAC 19-12-5](#) and should be deleted from [327 IAC 19-12-4](#). Additionally, we suggest that if a quality assurance plan prepared by a professional engineer is submitted that it result in an expedited review of an application. (LPRRG)

*Response:* IDEM has made significant revisions to storage capacity and design requirements by instituting industry accepted standards for design and construction requirements. Please refer to the new draft language. Additionally, the rule does not require a construction quality assurance plan and has been amended to require a registered professional engineer to certify to construction upon completion of any manure storage structure. The certification is to be kept in the operating record.

*Comment:* [327 IAC 19-12-5](#). Most of the design criteria for liners are in line with what the NRCS recommends in the animal waste management field handbook (AWMFH). In Appendix 10D of the AWMFH

(<http://www.wsi.nrcs.usda.gov/products/w2q/awm/docs/handbk/awmfh-chap10-app10d.pdf>) (PU)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards.

*Comment:* [327 IAC 19-12-5](#). The stipulation of specific technologies (i.e. geo-textile liners) severely limit the capacity for future implementation of technologies which may have similar capacity are limited. For this reason, we suggest not targeting a specific technology, but rather the performance standard. (PU)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards.

*Comment:* [327 IAC 19-12-5](#). Performance criteria should only be required when there is a need based on site risk. In addition, standard, economical, and accurate testing methodology for any performance criteria need to be available, but should not exclude new technological measures for failure and/or contamination. (PU)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards.

*Comment:* [327 IAC 19-12-5\(a\)](#). It is agreed, as has been the standard, that manure storage facilities that require a liner be developed by or under the supervision of a professional engineer and the design be certified by a professional engineer. (LPRRG)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Additionally, the construction of any manure storage structure must be certified upon completion by a registered professional engineer.



*Comment:* [327 IAC 19-12-5\(b\)](#). The proposed rule does not provide adequate protection because it allows the use of erodible clay soil as the only liner in certain conditions. A double liner and ground water monitoring should be required for all facilities. The clay soil liner should be protected from erosion by a synthetic liner. (MJMcC)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Please refer to the newly amended language.

*Comment:* [327 IAC 19-12-5\(b\)](#) and (c). It is proposed that [327 IAC 19-12-5\(b\)](#) and (c) as currently stated in the draft rule be deleted and replaced to state:

(b) Liners used in manure storage facilities must meet the following design standards:

- (1) have a seepage rate that does not exceed one-thirty-second ( $1/32$ ) cubic inch per square inch area per day.
- (2) liners constructed of earthen materials shall be at least eighteen (18) inches thick.
- (3) geomembrane liners, such as a high density polyethylene (HDPE) or polyvinyl chloride (PVC), shall be at least forty (40) mil (1.0 mm thick)
- (4) geomembrane liners require a gas release system to prevent gas build-up beneath the liner. (MV)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Please refer to the newly amended language.

*Comment:* [327 IAC 19-12-5\(b\)](#). We believe that the allowable seepage rate should be  $1/32$  cubic inch per square inch per day (approximately  $1 \times 10^{-6}$  cm/sec). (LPRRG)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Additionally, the seepage rate has been amended to  $1/16$  cubic inch per square inch per day.

*Comment:* [327 IAC 19-12-5\(b\)](#). The requirements of 5(b)(1) through (6) are very specific and there is no sound technical basis for requiring an escalating design standard based on the in-situ soils. This suggests that expensive and intensive site investigations will be required to determine and demonstrate compliance with these standards. Other provisions of this rule conflict with the expectations presented in [327 IAC 19-12-5\(b\)](#). Additionally, the escalating design standards included in 19-12-5(b) unnecessarily increase costs for no documentable benefit. (LPRRG)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Additionally, soil tests are not mandatory if a liner is used.

*Comment:* [327 IAC 19-12-5\(b\)\(1\)](#). How will this lower seepage rate be determined during the operation of the facility? The permit language will have to have some sort of seepage measurement and/or calculation that uses actual data, not laboratory data. (KJM)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards for liners. The rule currently requires at least three (3) feet of in situ soils that meet the maximum seepage rate, as determined by soil test. Less than that requires the use of a liner.

*Comment:* [327 IAC 19-12-5\(b\)\(2\)\(B\)](#). PVC should not be allowed as a liner material due to its inability to withstand UV degradation. (KJM)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. PVC is allowed under the listed NRCS standard but it requires that those who use it follow manufacturers' instructions on protecting the liner material from degradation from weather and exposure.

*Comment:* [327 IAC 19-12-5\(b\)\(4\)](#). The requirement must include compaction at optimum moisture content to insure that the clay materials are installed correctly and that the compaction reflects the laboratory measurement. (KJM)

*Response:* IDEM has amended the design requirements for liners to refer to Indiana NRCS standards. Compaction rates are contained in the design and construction standards for earthen lagoons, referred to in the rule.

*Comment:* [327 IAC 19-12-6\(b\)](#). Rule should include a requirement for cathodic protection for steel tanks. (KJM)

*Response:* The installation of underground steel storage tanks for manure is prohibited and steel tanks may only be installed above ground. Additionally, [327 IAC 19-12-4\(k\)](#) and [327 IAC 19-13-1\(f\)](#) have requirements regarding the strength and monitoring of steel tanks to ensure structural integrity, thus negating a requirement for cathodic protection.

*Comment:* [327 IAC 19-12-6\(b\)\(3\)](#). We suggest that this provision be rewritten to generally require that tanks be cleaned so that hazardous substances are removed prior to addition of manure to the tank. (LPRRG)

*Response:* This provision matches the current [327 IAC 16-8-9\(b\)\(4\)](#) and IDEM is unaware of any instances of noncompliance with the requirement.

*Comment:* [327 IAC 19-12-6\(c\)](#). It is proposed that the following be added to [327 IAC 19-12-6\(c\)](#) as [327 IAC 19-12-6\(c\)\(10\)](#):

**(10) except for soils within these soil classifications that according to USDA NRCS Soil Survey data or on-site investigation have a soil permeability of 2.0 inches per hour or less. (MV)**

*Response:* The rule has been amended to require that vegetative management systems must be constructed

according to the NRCS standard for Vegetated Treatment Area.

*Comment:* Vegetative management systems constructed in soils other than those listed as prohibited are unlikely to provide treatment or infiltration into the soil. Heavy soils are typically not conducive to growing and maintaining the necessary plants. The proposed rule should be rewritten to allow the use of proven vegetative management systems in sandy soils. (MJMcC)

*Response:* The rule has been amended to require that vegetative management systems must be constructed according to the NRCS standard for Vegetated Treatment Area.

### **Rule 13. Manure Handling and Storage; Operational Requirements**

*Comment:* [327 IAC 19-13-1](#)(c). Removal exclusively for land application is too narrowly drafted. Manure may also be removed for staging as well as other beneficial uses, such as for energy production in a digester or gasifier or pelletizing and selling. Also, manure may be transported from the site of production to another structure for storage. We suggest that to clarify any confusion which may exist with respect to transport that the provision state "Manure must be stored in an approved manure storage facility. . ." (LPRRG)

*Response:* This provision matches the current [327 IAC 16-19-1](#)(c), but IDEM has revised the language in the draft rule. The land application requirements listed in [327 IAC 19-14](#), and referenced in this provision allow for both staging and marketing. Additionally, for operations utilizing a digester, gasifier, or pelletizing unit at the operation, those structures are required to have an approval and would thus already satisfy the provision.

*Comment:* [327 IAC 19-13-1](#)(h). The tile discharge should be analyzed for TKN and total phosphorus during discharge. The parameters tested should include total dissolved solids (TDS), total phosphorus, and fecal coliform in an attempt to distinguish field tile drainage from manure application versus other fertilizer sources. The data should be submitted to IDEM in a monitoring report. (KJM)

*Response:* This provision has been deleted from the draft rule.

*Comment:* [327 IAC 19-13-1](#)(h). Because ammonia is a gas (NH<sub>3</sub>), samples would generally come out 0. Capping or visibly monitoring known tile outlets could be suggested as best management practices in the guidance but this does not belong in the rule. (PU) (MV) (LPRRG)

*Response:* This provision has been deleted from the draft rule.

*Comment:* [327 IAC 19-13-1](#)(h). Although we think this provision should be eliminated altogether, if IDEM chooses to retain it, clarification is needed limiting this provision to production areas and not land application areas. (LPRRG)

*Response:* This provision has been deleted from the draft rule.

*Comment:* [327 IAC 19-13-2](#). This rule should require the other registrations to be acquired before or during the permit review process. The rule directs the applicant to solid waste program only – would there also be an air quality component to some systems? (KJM)

*Response:* This is a Title 327 rule, and thus it can only address water quality issues. There are currently no applicable air quality registrations to reference.

*Comment:* [327 IAC 19-13-2](#). We oppose any requirement that digesters and other energy recovery systems must register with the solid waste program. (LPRRG)

*Response:* Currently the solid waste management program has the authority to regulate digesters and other energy recovery systems. The solid waste rules are going to be revised to establish a procedure for registration of digesters and other energy recovery systems that may use a wide variety of materials as feedstock. The rules will be structured to minimize the administrative requirements of obtaining an approval. Repeating the same set of requirements in a CFO rule for systems utilizing manure is inefficient and makes the development of inconsistencies between the CFO and Solid Waste Rules more likely.

*Comment:* [327 IAC 19-13-3](#). The sentence in [327 IAC 19-13-3](#) is confusing. We think this confusion could be rectified by removing the phrase "used to move manure" from the middle of the sentence. (LPRRG)

*Response:* This provision has been updated to match original rule language from [327 IAC 16](#).

*Comment:* [327 IAC 19-13-3](#). Clarification of "public thoroughfares" may be warranted. What are "authorized premises"? (PU)

*Response:* Such common terms retain their common meanings, "Public thoroughfares" means any thoroughfare open to the public. "Authorized premise" means any location to which the manure transporter has been allowed access.

*Comment:* [327 IAC 19-13-3](#). The sentence needs to be reworded so that it does not imply that dumping/leakage is allowed from vehicles that are moving manure to authorized locations. This may be the appropriate place to require the registration of any manure/wastewaters that enter Indiana for disposal that are not associated with a CAFO/CFO in Indiana. (KJM)

*Response:* IDEM agrees and has revised the language in the draft rule. The Office of the State Chemist is the agency with specific statutory authority to regulate manure from out-of-state being applied to Indiana land.

*Comment:* [327 IAC 19-13-4](#). We suggest that land application of the spill material collected should be an option here at agronomic rates similar to the statement at the end of [327 IAC 19-14-6](#) (e). (PU) (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language in the draft rule.

*Comment:* [327 IAC 19-13-4](#). Item (a)(1)(C) states "returning spilled manure or waste liquids to an approved

waste management system" does not address the problem when that system was the source of the spill (i.e., a failure of the containment system) or if it has no capacity to receive returned spilled waste volume and still maintain freeboard. (KJM)

*Response:* IDEM believes that in an emergency situation maintaining required freeboard is not as important as ensuring the spilled manure is cleaned up and returned to an appropriate storage facility. Additionally, IDEM has revised the rule to include an emergency provision for situations where a spill may be imminent.

*Comment:* [327 IAC 19-13-4\(a\)\(1\)\(C\)](#). We believe that this section should include clarification on the amount of manure or other related liquids which must be spilled before notice must be given. (LPRRG)

*Response:* Any further clarification on spilled materials may be found in the spill rule at [327 IAC 2-6.1](#).

*Comment:* [327 IAC 19-13-4\(a\)\(4\)](#). There should be delineation between that equipment/materials used to address chemical spills versus that equipment used to address manure/wastewater spills. (KJM)

*Response:* This rule is concerned with manure spills. [327 IAC 2-6.1](#) regulates all spills that could be a threat to water quality.

#### **Rule 14. Land Application of Manure**

*Comment:* First we would suggest a change in the terminology used in this section. CFO operators now base land application of manure on manure nitrogen content, not soil nitrogen content. (LPRRG)

*Response:* IDEM believes the terminology used is correct.

*Comment:* IDEM's response to comments in the first comment period concerning reporting and certification of land application events was inadequate. The policy and objectives for public participation in Clean Water Act programs should be applied to the CFO rule as well as the CAFO NPDES rule. See 40 CFR §§ 25.3 and 25.4. The public cannot meaningfully participate in the development and modification of manure management plans and nutrient management plans without information on land applications by specific facilities. Nor can the public meaningfully fulfill their rights and obligations under the Clean Water Act's citizen suit provision or contribute information about program and permit violations (see 40 CFR § 123.26(b)(3) and (4)) without such information. (HEC) (CLC) (SC) (CAC)

*Response:* IDEM's CFO program is operated under the authority granted under [IC 13-18-10](#). The CAFO NPDES rule does incorporate federal requirements regarding MMPs and NMPs. IDEM believes the system in place for the CFO program provides a balance of protection of Indiana's environment, citizens' right to know, and owners and operators ability to operate in an efficient and environmentally sound manner. Had the legislature wanted smaller farms than those required to obtain a NPDES CAFO permit under federal law to meet the same federal requirements, the CFO statutes at [IC 13-18-10](#) would have reflected that mandate. Currently they do not.

*Comment:* The CFO rule should have a reports and reporting section, similar to the rule for the land application of biosolid, industrial waste product, and pollutant-bearing water at [327 IAC 6.1](#); specifically section 6.1-4-18(a) and section 6.1-7-12(a). Moreover, these records and notifications are available to the public. (HEC) (CLC) (SC) (CAC)

*Response:* IDEM does not believe such a requirement is necessary given the soil and manure testing requirements and land application limitations contained within the CFO rule. Also, CFOs are subject to regular on-site inspections performed by IDEM compliance personnel.

*Comment:* The public should be able to be informed about the land application of manure. The first report, submitted by January 31, should describe the locations, with maps, of each site where manure will be applied during the coming year. If the operator adds a new site during the year, he or she must report that location to IDEM before manure is applied. By December 31, the operator should report where, when, and how much manure was applied on each of these sites. (HEC) (CLC) (SC) (CAC)

*Response:* IDEM does not believe such a requirement would provide information beyond what current testing requirements provide. Additionally, such a requirement would be very burdensome on the operator and would be very difficult to practically enforce. The draft rule record keeping requirements regarding land application practices mirror existing requirements found in the original [327 IAC 16](#).

*Comment:* IDEM should adopt the ASABE/NRCS excretion values (which several of the faculty writing this letter were instrumental in assembling) for the Guidance Document for this rule. These values are located at: <http://policy.nrcs.usda.gov/OpenNonWebContent.aspx?content=17768.wba> (PU)

*Response:* IDEM agrees with this comment and has added the reference.

*Comment:* We propose that when using N-based application rates, no application may exceed the crop nitrogen fertilizer recommendations after accounting for nitrogen losses due to application timing and method or four (4) times the expected crop phosphorus removal, whichever results in lower application rate. Limiting applications to some fixed value of maximum nitrogen loss due to application method or timing would be another possible approach. (PU)

*Response:* IDEM has adopted the ASABE/NRCS nitrogen application rates.

*Comment:* [327 IAC 19-14-1](#). This is also a good place to reinforce the need for registration for land application of manure/wastewater that is imported into Indiana. (KJM)

*Response:* This is not the appropriate place to regulate out-of-state manure. The Office of the State Chemist is the proper regulatory body to deal with this issue and has specific statutory authority to do so. That office is

currently working on regulations that will include requirements similar to the suggestion.

*Comment:* [327 IAC 19-14-1](#). The following is proposed:

Sec. 1. Land application of manure, litter, or process wastewater to land that is:

- (1) owned by the permittee;
- (2) rented **and land application decisions are controlled** by the permittee; or
- (3) utilized by the permittee under an agreement for land use **and land application decisions are controlled by the permittee**;

shall be done in accordance with the requirements of this rule. (MV)

*Response:* IDEM believes that the current draft language better expresses the responsible party for land application.

*Comment:* [327 IAC 19-14-2](#)(a)(2). This is confusing and unclear. (PU) (MV) (KJM) (LPRRG)

*Response:* IDEM agrees and has revised the language in the draft rule.

*Comment:* [327 IAC 19-14-2](#)(c)(4). Provisions for marketing and distribution of manure are found in [327 IAC 19-14-7](#), not in [327 IAC 19-13-5](#) as indicated in (c)(4). (LPRRG) (MV)

*Response:* IDEM has corrected the reference.

*Comment:* [327 IAC 19-14-2](#)(b). It is not necessary to have a land use agreement for all acreage utilized for the application of manure. It is more important to document the application of the manure in accordance with the rule than to document a potentially short-term agreement for land used to utilize the manure. It is proposed that [327 IAC 19-14-2](#)(b) be deleted and [327 IAC 19-14-2](#) be reorganized. (MV)

*Response:* This provision comes directly from the original [327 IAC 16](#) and IDEM is not aware of any compliance or enforcement issues that have arisen because of it.

*Comment:* [327 IAC 19-14-2](#)(c). Should include all calculations used to justify the lesser acreage using the alternative methods and/or innovative technology. It should also address whether or not the land application occurs in phosphorus limited watersheds and how that would impact the use of lesser acreage and still be protective of waters of the state. (KJM)

*Response:* IDEM believes that "to the satisfaction of the commissioner" would include calculations. Should the commissioner require additional information to grant such a request, he may ask for any information necessary to approve methods alternative to those spelled out in the rule.

*Comment:* [327 IAC 19-14-2](#)(d). This provision appears to be incomplete as written leading to confusion in an accurate interpretation. In the reorganization of this section this would be [327 IAC 19-14-2](#)(c). The following changes are proposed:

(d) Copies of any written waivers **documenting** related to a reduction of the **manure application setback to property lines setback distances** must be kept in the operating record. (MV)

*Response:* IDEM believes the current language is sufficiently clear as written.

*Comment:* [327 IAC 19-14-3](#). With comments rendered for the first notice of the CFO rule, there was concern expressed for an animal operation filing an appeal for a violation. The IDEM response did not adequately address this particular comment. (PU) (LPRRG)

*Response:* The concern expressed was in relation to an operator disagreeing with in an inspector's findings during an inspection, not filing an appeal. The administrative appeals process is always available when the agency makes a determination affecting the rights of a person. That process is the formal appeals process. However, complaints as to IDEM employees' performance should be reported to that person's immediate supervisor as soon as possible. State law requires that an inspector provide an oral report of his or her findings that may lead to a notice of violation at the time of the inspection and follow that up with a written summary within 45 days of the inspection. Should the owner not be available at the time of the inspection, the inspector is required to mail the summary by certified mail within 45 calendar days of the inspection. These requirements are found at [IC 13-14-5](#).

*Comment:* [327 IAC 19-14-3](#). This part of the rule does not address the use of computer programs and whether or not various programs will be accepted by IDEM as documentation and how that software is explained by the applicant (i.e., data inputs, assumptions, limitations of the output, reliability of the software). (KJM)

*Response:* IDEM is aware that there are many computer programs that can assist producers in many ways. However, mandating use of a particular program is not appropriate in this rule. It is an issue better dealt with in guidance.

*Comment:* [327 IAC 19-14-3](#). We suggest that manure applications made in the summer and fall prior to a crop being planted be allowed to have an increased rate of nitrogen application which would be consistent with the rates applied from other sources of nitrogen which could be applied in the fall. (LPRRG)

*Response:* IDEM has included allowances for nitrogen loss during land application. The rule currently references the Purdue University Cooperative Extension Service publication ID-101: Animal Manure as a Plant Nutrient Resource, February 2001. That document discusses how to estimate nitrogen loss.

*Comment:* The application of manure, nitrogen and micronutrients are critical to crops and soil maintenance. The farmer accepting the manure and the livestock operator should determine what is appropriate for the land. An across-the-board rule on nitrogen loss is contrary to extensive university research and could be inappropriate for



the soil type receiving the manure application. (TMC) (EL)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* Most facilities are not designed to hold twelve months of manure, and applying that much manure during spring and summer results in over-application and applying during wet weather. A better solution would be to allow for reasonable nitrogen loss for proper application. (MSD)

*Response:* IDEM has included allowances for nitrogen loss during land application. The rule currently references the Purdue University Cooperative Extension Service publication ID-101: Animal Manure as a Plant Nutrient Resource, February 2001. That document discusses how to estimate nitrogen loss.

*Comment:* Manure application should be allowed based on nitrogen requirements for upcoming crop plant needs, and allow more than one year of phosphorus to be placed on the field during one application. Not allowing phosphorus to be applied on soils high in phosphorus will increase the number of acres needed for manure application and have a detrimental effect on grain producers that need the phosphorus and other nutrients in the manure. (MSD)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-14-3](#). Soil tests should not represent more than 20-30 acres for best management and should probably not represent more 40 acres in this rule. (PU)

*Response:* IDEM agrees with this comment and has revised the draft rule language.

*Comment:* [327 IAC 19-14-3](#)(e). The list of information required for the operating record should include the following: "(9) Content of pathogens, including E. coli, Listeria, Salmonella, and a treatment plan in the event that pathogens are found in manure." (HEC) (CLC) (SC) (CAC)

*Response:* IDEM does not intend to include the requirement that operators test for pathogens. Current limitations on land application activities incorporate Best Management Practices to minimize the risk of pathogen transport to waters of the state. There are currently no pathogen-related standards within the federal regulations for animal feeding operations. IDEM believes current land application restrictions tied to soil types and topography are the most practical way to protect the waters of the state.

*Comment:* [327 IAC 19-14-3](#)(e)(7) and (8). The statements in (7) and (8) must be revised to read "available manure nitrogen and total manure phosphorus". As written, it implies that IDEM wants to include sources other than manure, which goes beyond the mandate of this rule. (PU) (LPRRG)

*Response:* IDEM agrees with this comment and has made some revisions to the draft language.

*Comment:* [327 IAC 19-14-3](#)(e)(7) and (8). In 2008, IDEM personnel stated that any producer who applied manure based on potentially available manure nitrogen (no losses due to application method or timing) that also applied commercial fertilizer nitrogen would be cited for an over-application of nitrogen unless they had used the PSNT to document the need for more nitrogen. This leaves producers in an untenable position. The most generous assumption that we are willing to allow is that 200,000 acres of corn (equivalent to 3 percent of the Indiana corn crop) use the PSNT soil test, so most producers could plausibly falsify their records because IDEM's current approach to estimating manure nitrogen availability is not based on science in any conceivable way. (PU)

*Response:* IDEM agrees with this comment and has made revisions to the draft language.

*Comment:* [327 IAC 19-14-3](#). Why allow an additional three years of land application based on nitrogen when the phosphorus levels exceed 200 ppm? How will IDEM protect phosphorus limited watersheds if the soils are sandy and thereby do not retain phosphorus (i.e., the soil phosphorus would be low)? (KJM)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-14-3](#)(a). This section of the rule should be revised to say as follows: "The owner/operator of a confined feeding operation shall have a soil test and a manure test conducted in accordance with the manure management plan submitted to meet the requirement in the current [327 IAC 16-7-2](#)(b)(6)." (HEC) (CLC) (SC) (CAC)

*Response:* As [327 IAC 16](#) is being repealed, the section to which you are referring is the manure management plan within the application requirements previously found at [327 IAC 16-7-2](#). The new reference to [327 IAC 19-7-1](#) in the rule is the correct reference in that it refers to the manure management plan as required as part of the application for approval.

*Comment:* [327 IAC 19-14-3](#)(a). The requirements for soil borings and seasonal water table information at [327 IAC 19-7-1](#)(c)(7) are incorrectly referenced in this provision of the rule. It is believed that the correct reference is [327 IAC 19-7-1](#)(c)(5). (MV)

*Response:* IDEM has corrected the reference.

*Comment:* [327 IAC 19-14-3](#)(b). For this provision, the following changes are proposed:

(b) The agronomic rate **of application of nitrogen** for ~~potentially available nitrogen~~ must not exceed the nitrogen (N) requirements of current or planned crops of the upcoming growing season as documented in the operating record. (MV)

*Response:* IDEM believes that the term "potentially available nitrogen" is more accurate.

*Comment:* [327 IAC 19-14-3\(c\)](#). We suggest editing this to read, "... soil test phosphorus values that are less than 51 ppm (or less than or equal to 50 ppm) and 51 to 100 ppm". (PU)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-14-3\(c\)](#). This should reference "crops" as it is entirely appropriate and necessary to apply manure based upon the phosphorus need of crops for the next several years. (LPRRG) (PU)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-14-3\(c\)](#). Use of the phrase "eliminate phosphorus applications" must be removed as it has no place in the rule. A manure application made at an nitrogen rate equal to 3x the crop phosphorus removal rate would result in manure applications being made only every three years. It is not economically feasible, nor easily achievable for manure to be applied on a single year's phosphorus removal rate basis, especially with injected liquid manures. (PU)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-14-3\(c\)](#). It is proposed that [327 IAC 19-14-3\(c\)](#) be deleted and replaced with the table below:

Soil test level (ppm)	YEAR			
	1-2	3-5	6-10	10+
0-50	N based	N based	N based	N based
51-100	1.5 x P crop removal	1.5 x P crop removal	1.5 x P crop removal	1.5 x P crop removal
101-200	1.0 x P crop removal	1.0 x P crop removal	1.0 x P crop removal	1.0 x P crop removal
201-250	0.9 x P crop removal	0.75 x P crop removal	0.75 x P crop removal	0.75 x P crop removal with SCPP demonstrating soil loss below allowable T
251-275	0.9 x P crop removal	0.75 x P crop removal	0.5 x P crop removal	0.5 x P crop removal with SCPP demonstrating soil loss below allowable T
276-300	0.9 x P crop removal	0.75 x P crop removal	0.25 x P crop removal	0.25 x P crop removal with SCPP demonstrating soil loss below allowable T
301-350	0.7 x P crop removal	0.5 x P crop removal	0	0
351-400	0.7 x P crop removal	0.25 x P crop removal	0	0
400+	0	0	0	0

(MV) (LPRRG)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* Phosphorus land application restrictions represent a large burden on the Indiana economy without providing a clear water quality benefit. Restriction of phosphorus is best accomplished through development and regulation of TMDLs within the NPDES process, and is not well suited to regulation of land application practices at non-point sources. Non-point sources may be able to enter into voluntary nutrient trading agreements in the future, which will incentivize the implementation of best management practices beyond what can reasonable be written into the regulation. (SDS) (T & M)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* Soil test phosphorus is not an indication of leaching potential or total phosphorus in the soil, but only an indication of how much phosphorus is available for plant use. Using soil test phosphorus as proposed in the draft rule requires speculation beyond the range of crop response and is unproven and scientifically indefensible. These factors should be used within a risk based assessment which considers the need for managing phosphorus in surface runoff with best management practices that increase nutrient trapping and reduce total runoff. (SDS)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* Threshold limits proposed in [327 IAC 19-14-3](#) are not based on a purely scientific rationale for reducing phosphorus transport potential, and they include ethical considerations regarding how much excess phosphorus a producer may store within a land base. Limiting phosphorus application because phosphorus is a limited resource is not appropriate for regulation. This section of the rule should be redrafted to address manure conveyance by runoff and soil erosion only, and to allow for site specific review of risks through a phosphorus risk

assessment. (SDS) (MJMcC)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* The phase-in period in the rule is not realistic. Producers will need more time to implement these changes, especially when IDEM is proposing to do nothing for the first three years of the proposed six year phase-in period. (EL)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* Anyone spreading CFO or CAFO-generated manure should follow a manure management plan with phosphorus as a limiting factor and should follow all CFO and CAFO manure application regulations. (ECCRC)

*Response:* IDEM has made significant revisions to nitrogen and phosphorus application requirements. Please refer to the new draft language.

*Comment:* [327 IAC 19-14-4\(a\)](#). We oppose the reduction of time for staging without covering the material from 72 hours to 24 hours. (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language in the draft rule.

*Comment:* CFO or CAFO-generated manure should not be stockpiled for more than 96 hours outside a regulated manure holding structure. (ECCRC)

*Response:* Manure that is staged at a land application site for more than 72 hours must be covered or bermed to prevent run-on or runoff and can only be staged in accordance with the rule requirements.

*Comment:* [327 IAC 19-14-4\(a\)\(4\)](#). We cannot support this provision with respect to setbacks from residential buildings. There is no indication that this provision has anything to do with water quality concerns and is outside of the purview of IDEM. (LPRRG)

*Response:* IDEM has adopted the Indiana NRCS land application setbacks.

*Comment:* [327 IAC 19-14-4\(b\)\(1\)](#). We believe that this requirement is unduly restrictive. Additionally, we do not believe the restriction should apply to privately owned farm ponds. Also, with respect to wells, the restriction should be limited to drinking water wells for human consumption. (LPRRG)

*Response:* This provision comes directly from the original [327 IAC 16](#) and IDEM is unaware of any problems it has caused to date.

*Comment:* [327 IAC 19-14-4\(b\)\(3\)](#). A landowner should be able to stage manure for a limited period of time in a flood plain if conditions such as weather forecasts, river levels, and recent rainfall for both the application location and upstream watersheds are considered. (LPRRG)

*Response:* This provision comes directly from the original [327 IAC 16](#) and IDEM believes that staging in a flood plain is an unnecessary risk to water quality. As evidenced by recent late-winter flooding in Indiana, weather conditions can change quickly and dramatically providing the operator no opportunity to move the staged material or provide flood protection.

*Comment:* [327 IAC 19-14-4\(c\)](#). It may take more than one day to clean out a large building, and leaving the material outside over night does not create an environmental risk. Inclement weather, which is included in the provision, is a legitimate concern to which this restriction should be limited. (LPRRG)

*Response:* This requirement has been standard in CFO approvals issued since February 2002 and IDEM is unaware of any problems it has caused to date. The inclusion of this provision allows producers needed flexibility to the requirements within [327 IAC 19-13-1\(c\)](#) which, like the current rules at [327 IAC 16](#), currently allows no such practice.

*Comment:* [327 IAC 19-14-4\(d\)](#). The restriction on staging manure to the amount which can be applied in a particular field is inconsistent with normal management activities. (LPRRG)

*Response:* This provision has been deleted from the draft rule.

*Comment:* [327 IAC 19-14-4\(e\)](#). Application to frozen and snow covered ground should be allowed with the creation of a winter-time manure application plan. It would also be beneficial to include provisions for emergency applications in certain circumstances; this should also apply to manure application on saturated ground. (LPRRG)

*Response:* IDEM has revised the prohibition of land application to frozen and snow covered ground.

*Comment:* On a limited basis, we have successfully applied manure to frozen ground in accordance with a soil conservation practice plan in an environmentally sound manner. Not being able to continue this practice on a limited basis will cause a significant financial impact. (T & M)

*Response:* IDEM believes proper planning will in most cases alleviate the need to apply to snow-covered or frozen ground. However, IDEM is aware that issues and emergencies can arise and has built a contingency into the rule to allow for such application on an emergency basis.

*Comment:* [IC 13-18-10-4\(2\)\(B\)](#) provides that uniform standards for manure application are appropriate for a specific site. Prohibiting application of manure to frozen or snow covered ground without exception prevents application of site-specific best management practices, and provides none of the flexibility contemplated by [IC 13-15-2-2\(a\)\(6\)](#). Manure application to frozen or snow covered ground should be allowed if conducted under a management plan that includes a field based suitability and risk assessment. (T & M) (MJMcC)

*Response:* IDEM believes proper planning will in most cases alleviate the need to apply to snow-covered or frozen ground. However, IDEM is aware that issues and emergencies can arise and has built a contingency into the rule to allow for such application on an emergency basis.

*Comment:* We agree with the prohibition on applying waste or manure to saturated, frozen or snow covered ground. (JJH) (BSC) (AJH)

*Response:* IDEM concurs, except in very limited, emergency situations.

*Comment:* Manure application on acreage with a phosphorus level greater than 200 ppm should be prohibited. (JJH) (BSC) (AJH) (ECCRC)

*Response:* The rule as currently drafted does not allow for land application on acreage with phosphorus levels above 200 ppm for large CAFOs and CFOS approved for construction after the effective date of the new rules. Existing smaller facilities will have a time-frame set forth in the rule to come into compliance with this requirement.

*Comment:* Manure from a CFO or CAFO should not be applied to frozen ground or less than 24 hours prior to a forecasted major rain event. (ECCRC)

*Response:* IDEM agrees.

*Comment:* [327 IAC 19-14-4\(e\)](#). We suggest rephrasing to read "No surface applications to land with > 2% slope or to bare/tilled ground" to account for provisions where injected manure applications below the frost line could be accomplished. (PU)

*Response:* IDEM agrees with this comment and has revised the language in the draft rule.

*Comment:* [327 IAC 19-14-4\(g\)](#). This provision takes away any discretion which exists in how to handle a particular situation. This provision also does not take into account that a particular segment of water may already be in violation of the water quality standards or be so close to violation that it would be unfair to single a livestock or poultry operation out for an enforcement action. (LPRRG)

*Response:* IDEM has revised the language of this section.

*Comment:* [327 IAC 19-14-4\(g\)](#). This statement substantially ignores the federal agricultural storm water exemption. If a producer has developed and follows (with appropriate records) a nutrient management plan, water quality violations that result should automatically receive the federal agricultural storm water exemption. Thus we contend that this statement should be significantly revised or removed. (PU) (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language in the draft rule.

*Comment:* [327 IAC 19-14-5\(a\)](#). A farmer should not be subject to a violation for using spray irrigation if minor ponding occurs in limited areas or some time passes before the manure is absorbed into the soil. We also suggest that application of manure and process wastewater by spray irrigation could be allowed at reduced rates when there is less than 20 inches of soil above the bedrock. (LPRRG)

*Response:* If an operator can demonstrate to the satisfaction of the commissioner that spray irrigation can be conducted in an environmentally protective manner through the use of an alternate design or innovative technology, the commissioner may approve the activity in accordance with [327 IAC 19-5-1](#). So long as spray irrigation activities are conducted to prevent excessive application, occasional ponding and slow infiltration should not rise to the level of a violation. Should the ponding be wide-spread and the ground saturation prevent soil uptake of the spray irrigation, it would be prudent for the operator to discontinue the irrigation until the soil has absorbed the applied liquids.

*Comment:* [327 IAC 19-14-5\(a\)](#). Limiting one-time application rates to some fraction of an acre-inch (13,500 gallons/acre would be 0.5 acre-inches and 7000 gallons/acre would be 0.25 acre-inches) would be a much more effective and practical approach to addressing this water quality concern. Perhaps IDEM could use language similar to that found in [327 IAC 19-14-6 \(d\)](#), or change this to state the implied intent of not allowing for excessive ponding or runoff. (PU)

*Response:* The intent is not implied. The rules states that spray irrigation activities must be conducted to prevent equipment leaks and excessive application. Excessive application is indicated by ponding and a rate that exceeds the infiltration rate of the soil. Limiting one-time application rates to some fraction of an acre-inch could not be practically enforced by IDEM inspectors.

*Comment:* [327 IAC 19-14-5\(d\)](#). County soil survey books are no longer the official source of NRCS soils information. Those data reside in the NRCS soil data mart. Additionally, the term "drainage basin" needs to be defined, as one could interpret this as the entire Mississippi River drainage basin (as an example). (PU)

*Response:* IDEM agrees with the comment and has revised the language in the draft rule.

*Comment:* [327 IAC 19-14-5\(d\)\(2\)](#) and (3). While we would like clarification on what exactly is meant by "drainage basin," the considerations in (d)(3) provide adequate protection and the restriction in (d)(2) is unnecessary. (LPRRG)

*Response:* IDEM believes that the restrictions on spray irrigation are necessary and must be used in concert to provide adequate protection from run-off. These restrictions mirror the management practices contained within the current NPDES CAFO rule and relieves CFOs, as currently required, from seeking a site-specific plan approval. These same practices have been incorporated into all spray irrigation plans for CFOs which have been approved by IDEM, and the inclusion of these requirements is an effort to standardize management practices



already currently implemented through policy.

*Comment:* There should be stronger rules on drag lines including the site and length of time they are allowed to be under roads and in drainage ditches, creeks and culverts. (BSC)

*Response:* The requirements for spray irrigation deal mainly with assuring that liquid is not over-applied onto fields. The regulation on the use of drag lines specifically has not been addressed in this rule. There is, however, an over-arching expectation that all equipment will be managed and maintained in a matter that does not cause discharges. This is one of the reasons equipment inspections are required.

*Comment:* [327 IAC 19-14-6](#). It is proposed that injection and single-pass incorporation be added back to the setback table allowing for efficient land use and management associated with the application of manure and wastewater using injection application methods. (MV) (LPRRG)

*Response:* IDEM agrees with this comment and has inserted the NRCS setbacks into the draft language.

*Comment:* [327 IAC 19-14-6](#). We question why setback distances were changed from the previous table. We recommend keeping the current CFO setback table or adopting the NRCS setback requirements. (LPRRG)

*Response:* IDEM agrees with this comment and has inserted the NRCS setbacks into the draft language.

*Comment:* [327 IAC 19-14-6](#). Why would the setback to a public water supply be less when the manure is land applied than when it is held in storage? The setbacks do not consider aquifer recharge areas for public and private water supply. Why is the setback the same for land that is less than and greater than 6 percent? The greater slope of the land is indicative of erosion and proximity to surface drainage leading up to waters of the state. Why would the setback to public water supply be 500 feet regardless of slope but double if near waters of the state? There needs to be setbacks to residential homes and businesses of at least 500 feet, if not more depending on whether or not the setback must use the adjacent landowner's property. (KJM)

*Response:* IDEM has inserted the NRCS setbacks for land application into the draft language. IDEM feels that the listed setbacks are sufficient to protect the waters of the state.

*Comment:* [327 IAC 19-14-6\(a\)](#). "Surface Waters of the State" is not defined (whereas surface water is). We ask for clarification of terminology. IDEM should clearly define whether application setbacks apply to private ponds (both the CFO operator's pond and neighboring landowner's ponds). Our suggestion would be to make a distinction between ponds with outlets (i.e. ponds with levees) and ponds that do not have outlets. Additionally, we suggest that setbacks should be defined for any pond not under control of the operation. (PU) (LPRRG)

*Response:* The reference to surface waters of the state was used to provide clarity that setback distances are determined in reference to surface waters rather than groundwater. The statutory definition of waters of the state includes ground water. IDEM felt it was important to make that distinction. It is not relevant to the protection of water quality to determine who has control or ownership of a body of water. For purposes of manure application, the important consideration is making sure that no manure fouls these waters through incorrect application or inadvertent run-off. The terminology is the same as has existed since the inception of CFO regulations at [327 IAC 16](#). To date, no confusion has arisen based on how the setbacks have been defined in current regulations.

*Comment:* [327 IAC 19-14-6\(a\)\(3\)](#). How will a 35 feet filter strip provide the same protections as a 200 feet setback to waters of the state? Does this sentence imply that land application could occur 35 feet from a drainage inlet if there is a filter strip? (KJM)

*Response:* IDEM has changed the draft language to make the filter strip 50 feet to match NRCS standards.

*Comment:* The regulation should differentiate between injection and incorporation relative to adjacent property lines, roads and waters. The proposed rule should include setback distances for injection as currently listed in [327 IAC 16-10-4](#). The proposed setbacks erode private property rights and provide no incentive for liquid injection to improve efficiency. (T & M) (MJMcC) (EL)

*Response:* Setback distances have been amended to incorporate Indiana NRCS practice standards for Manure Application.

*Comment:* Setbacks as zoning requirements have been a local government responsibility. IDEM should keep the current setback standards and allow the local community to determine its own requirements. (TMC)

*Response:* IDEM's responsibility is to protect Indiana's environment, and specifically with these rules, the waters of the state. Setbacks within the rules are designed to protect Indiana's waters and allow adequate time and space for owners and operators to conduct cleanups should there be a release of manure. [IC 36-1-3-8](#) provides that a unit of local government does not have the power to regulate conduct that is regulated by a state agency, except as expressly granted in state statute. The rules do not supplant local zoning requirements to the extent these requirements are not regulating conduct regulated by IDEM.

*Comment:* Setbacks are not sufficient from property lines, public roads, homes, schools and hospitals. (JJH) (BSC) (AJH) (KP) (FD)

*Response:* IDEM believes the setbacks are sufficient.

*Comment:* [327 IAC 19-14-6\(a\)\(4\)](#). What height of barrier would be allowed? Whose land would be flooded from this effort? It seems as if the only reason to allow gradient barriers is to further reduce the minimal setbacks to an absurdly tiny setback of 10 feet. (KJM)

*Response:* If a gradient barrier prevents run-off and protects wells, sinkholes, and surface waters, it is adequate.

*Comment:* [327 IAC 19-14-6](#)(b) and (c). These requirements are found in [327 IAC 19-14-4](#). While they are consistent, they should be included in one place to minimize the size of the rule. (LPRRG) (SDS)

*Response:* IDEM believes the requirements found at [327 IAC 19-14-6](#) are more specific in terms of requiring, for example, visual inspection of surface water conveyance channels on fields where land application activities take place. The requirements of [327 IAC 19-14-4](#) are more general in nature. The requirements are not duplicative.

*Comment:* [327 IAC 19-14-6](#)(e). Our contention is that monitoring should not be required for land application areas if producers are following a nutrient management plan and thus should be able to receive the federal storm water discharge exemption. (PU)

*Response:* The CFO rule does not require a nutrient management plan as is required under the federal CAFO NPDES rules. IDEM believes monitoring for run-off or discharge from a field tile is the most effective way to assure no water quality violations and also to correct any problems as they are happening. Given the large number of field tiles found in Indiana fields, IDEM believes it is a good management practice and an excellent preventive measure to protect Indiana's waters.

*Comment:* [327 IAC 19-14-6](#)(e). We propose that (e) should read: "Land application sites must be inspected to locate any **reasonably identifiable** field tile outlets. . ." (LPRRG)

*Response:* IDEM does not see the value in this language addition given the vague nature of the term. Field tiles are, except in areas of breakage and subsequent cave-in, underground. Thus, one view would be that they are never "reasonably identifiable" given the fact that they are supposed to be buried. However, given the proliferation of field tiles in Indiana farm fields, it is also reasonable to assume that most fields with decent drainage, particularly those in clay-dominated soils, have field tiles. Thus, the suggested term is so vague as to not add value to the rule.

*Comment:* [327 IAC 19-14-6](#)(e). This is a wonderful requirement but there is no indication of how it will be enforced. The provision needs a reporting requirement that includes the personnel that did the inspection, a map of each field showing the location of the field tiles and the point of monitoring, among other activities. The report should be submitted annually to IDEM. (KJM)

*Response:* The point of this requirement is to identify any land application problems as they occur and stop any potential discharges from fouling waters of the state. IDEM does not see the added value in providing an annual report submittal requirement.

*Comment:* [327 IAC 19-14-7](#)(d). The draft rule is inconsistent with [355 IAC 7-3-3](#) which applies only to fertilizer material (manure) distributed to produce an agricultural crop. The proposed rule should acknowledge that other uses of manure exist besides producing an agricultural crop. Manure distributed for non-crop production should be exempted from this section. (SDS)

*Response:* IDEM will continue to work with the OSC to assure consistency among the state rules. As this rule is a water quality rule, dealing primarily with the land application of manure and practice standards that will keep the manure from waters of the state, it speaks primarily to those uses consistent with that purpose. A complete waiver from the need for acreage is contemplated in the draft rule and [327 IAC 19-5-1](#) allows for the use of a design or compliance approach other than a requirement specified within the rules so long as the innovative technology is approved by the commissioner.

*Comment:* [327 IAC 19-14-7](#)(e). We feel that the restrictive nature of the waiver of the land application acreage unduly penalizes operations with a history of marketing more than 75% of their manure (in some cases up to 100%). Any operation that exports some manure should only be required to have the land base needed to manage the manure that is not exported. (PU) (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language.

*Comment:* [327 IAC 19-14-7](#)(e). An operation should not have to wait two years before being able to offset the available acreage requirement by marketing manure. (PU) (LPRRG)

*Response:* IDEM believes it is vital to have a proven track record of a farm's ability to market manure. Therefore, in light of the change made to allow a waiver for 100% of manure, the requirement in the draft rule is now 3 years, or a written contract for the marketing of manure for the entire approval term.

*Comment:* [327 IAC 19-14-7](#)(e). The timing of this rule as well as guidance and educational programs for poultry and livestock producers must be in concert with implementation of the "nutrient application certification" program from the Office of the IN State Chemist. (PU)

*Response:* IDEM agrees with this comment and will work with the Office of the State Chemist.

#### **Rule 15. Decommissioning of Manure Storage Facilities**

*Comment:* [327 IAC 19-15-1](#). We are uncertain about the meaning of "when the environmental threat has been removed". We suggest that [327 IAC 19-15-1](#) be eliminated and that [327 IAC 19-15-2](#) controls the decommissioning of a manure storage structure. (LPRRG)

*Response:* This phrase mirrors the original [327 IAC 16](#) and means that the manure storage facility is deemed decommissioned when there is no longer a threat to the environment. IDEM feels this is an important part of ensuring the protection of human health and the environment.

*Comment:* [327 IAC 19-15-2](#). We urge IDEM to recognize that allowances should be made for alternative approved closure plans on a case by case basis that consider future plans for the manure storage structure.

(LPRRG) (MV)

*Response:* The alternative compliance section in [327 IAC 19-5](#) applies to all aspects of this article. It is unnecessary to repeat it. IDEM believes that the current standards are protective of waters of the state while not being too restrictive.

*Comment:* [327 IAC 19-15-2](#)(c). We urge that this be amended to include written reasons from the commissioner when requiring additional decommissioning activities. (LPRRG)

*Response:* IDEM agrees with this comment and has revised the language.

#### **Rule 16. Exiting the Confined Feeding Approval Program**

*Comment:* [327 IAC 19-16-2](#)(b). In these requirements, no actual standards are given – the criteria they must meet should be clear. We also suggest that a provision be included that clearly indicates the level of environmental compliance needed to exit the program. As an example, a history of no discharges within the previous five years should be sufficient to qualify an operation for exiting the program so long as the other conditions are met. (LPRRG)

*Response:* IDEM agrees that along with the commissioner's approval of the information submitted in (b), a history of no discharges for 5 years would be sufficient to exit the program. However, it would be impossible to list every possible instance in which IDEM would approve a request to leave the program. In this case, basic considerations are better suited to the rule rather than a set of prescriptive requirements.

*Comment:* [327 IAC 19-16-3](#)(b). This provision does not include the considerations made previously in the rule with respect to decommissioning a facility. Specifically, they do not allow for removal to the extent practicable. A determination of "how clean is clean" for a particular site should be based on the site specific conditions required for the planned future use of the property while also ensuring protection of water quality. (LPRRG)

*Response:* [327 IAC 19-16-3](#)(a) references the decommissioning standards in [327 IAC 19-15](#).

#### **SUMMARY/RESPONSE TO COMMENTS FROM THE FIRST PUBLIC HEARING**

On May 11, 2011, the Water Pollution Control Board held the first public hearing/board meeting on new rules at [327 IAC 19](#) concerning confined feeding operations. Comments were made by the following persons:

Barbara Sha Cox (BSC)

Bowden Quinn, Sierra Club, Hoosier Chapter (BQ)

Richard Miller (RM)

Justin Schneider, Indiana Farm Bureau (JS)

Michael Veenhuizen, Livestock Engineered Solution, Inc. (MV)

Brian Shuter, Indiana Beef Council (BS)

David Hardin, Indiana Pork (DH)

Jeff Smiley (JS)

Kristin Whittington, Landmark Enterprises (KW)

Todd Janzen, Indiana Professional Dairy Producers (TJ)

Scott Harmon, EarthWise, Inc. representing Fair Oaks Dairy Farm and Bos Dairy Farms (SH)

Dan McInerney, Bose, McKinney & Evans (DMcI)

Tim Maloney, Hoosier Environmental Council (TM)

Jeffrey Hyman, Conservation Law Center (JH)

Julia Vaughn, Citizens Action Coalition Education Fund (JV)

Livestock and Poultry Rule Revision Group (LPRRG)

Following is a summary of the comments received and IDEM's responses thereto:

#### **Rulemaking Process**

*Comment:* The commentor observed that the number of rule changes made by IDEM in response to comments is unmatched in the history of the Water Pollution Control Board. The rule being presented to the board with these extensive changes was provided to the public for review less than two weeks before the hearing. Both the public and the board need more time to understand the extent of the changes and the reasons for them. IDEM made changes to the rule in response to 60 percent of the comments provided by the livestock industry, while responding to the comments of the public and public interest groups with changes only 23 percent of the time. IDEM should have provided a "track-changes" version of the rule to make it clear what changes were made. Without such a version it will be difficult and time-consuming for members of the public to know what changes were made. We were told that we would have an opportunity to review and discuss the revised rule before it was presented to the board, but this hasn't happened. The board should require the Office of Land Quality to release a track-changes version of the rule and discuss it with stakeholders before voting today to preliminarily adopt the rule. (BQ)

*Response:* It is IDEM's intent to hear everyone's concerns and address issues as appropriate, and while it would have been ideal to provide more time prior to the preliminary adoption there is time after preliminary adoption and during the third notice period for interested parties to review and comment formally on the rule. The extensive number of revisions that staff made to the rule over the course of considering all of the comments submitted did not make a "track changes" version possible.

*Comment:* We are concerned that as the rule moves forward, the laws of inertia come into play and if these requirements remain in the rule as it comes before the board for final adoption, it will be that much more difficult to bring them back to what we consider to be a more reasonable rule. (DMcl)

*Response:* The rulemaking process with its' third notice provides opportunity to discuss specific concerns and work through changes before final adoption of the rule.

*Comment:* We believe the rulemaking statutes require a third notice of comment period because of the substantive changes from second notice, and we urge that be done before preliminary adoption. (TM)

*Response:* IDEM agrees and a third notice will be provided. Please note, however, that by statute the third notice applies to a rule that is preliminarily adopted and cannot be published prior to preliminary adoption.

### **Annual Reports**

*Comment:* Operators should be required to submit annual reports on manure applications. This requirement would not significantly increase the burden on operators since the Office of the Indiana State Chemist will require submission of the same data. The reason for submitting the report is to make them available to the public, particularly to citizens around the state who monitor water bodies near their homes. By linking the manure application information to their water sampling data, these citizen volunteers will be able to determine whether manure applications raise E. coli or nutrient levels in the waters they sample. Adding this provision will give IDEM tangible information on how well the rule works. This information should be forwarded to IDEM to make it easily available to the public. (BQ) (RM) (TM)

*Response:* Review of current drafts of the State Chemist proposed rule do not indicate that they will be requiring the submittal of any annual reports. IDEM has adopted land application standards that, when complied with, are considered to provide a high level of assurance that nutrients and other manure constituents are retained in the soil and have negligible losses to runoff. IDEM believes that requiring reports containing manure application records would not assist the state's ability to monitor water quality or to determine if the requirements of the rule are effective. Land application records are reviewed by IDEM inspectors during the farm inspections.

*Comment:* From a producer's standpoint, requiring CFOs to submit annual reports is an unnecessary additional regulatory burden. (TJ)

*Response:* Since IDEM has not identified a beneficial use of the information for the agency we are not proposing to require annual reports.

### **Guidance Documents**

*Comment:* Guidance documents will be needed to explain many of the provisions in this rule: ground water monitoring, manure sampling and analysis, soil sampling, analysis and interpretation, inspection and record-keeping, and storm water management practices. We are opposed to final adoption of this rule before development of needed guidance. (LPRRG)

*Response:* A CFO Guidance Manual issued by IDEM already exists for most of these topics and IDEM will be reviewing and revising the document prior to the rules becoming effective. Such revision is difficult until the Rule is final adopted and we know for certain what the requirements will be.

*Comment:* Concerning guidance documents, if we producers are going to be governed by the rule, we need to know what, in plain English, we're going to be asked to do as far as new requirements and additional requirements that may not have been in the previous CFO rule. (DH)

*Response:* Staff will be providing information that identifies which requirements are new under the revised rule.

### **Technical Standards**

*Comment:* While there is value in providing standards that are available and well tested, these standards are routinely updated, while the rule refers to specific versions. IDEM should maintain a repository for the specific document versions specified in the rule. (LPRRG)

*Response:* IDEM must assemble a complete package for the rulemaking process that will include a copy of each standard referenced in the rule. We will explore the option of providing the free references on an internet site and a link to other sites for references that are copyrighted and must be purchased.

*Comment:* [327 IAC 19-12](#). I am concerned about the technical standards and the prescriptive nature of this rule, and that these standards have actually been put in rule language. We are freezing our progress and technology by including them in these rules. These standards should be removed from the rule prior to preliminary adoption. (MV)

*Response:* IDEM went back and forth between placing specific technical standards in the rule or referencing technical standards that are already published by third parties. Either approach would require a rule change to update the standards. It is IDEM's position that referencing the technical standards is preferred because they often have flexibility within them. In addition, the rule has built into it a section on "Alternate design or compliance approach; innovative technology", that provides a significant amount of flexibility in considering innovative approaches.

### **Definitions**

*Comment:* The term "waste" appears repeatedly in definitions and other provisions of this rule. We agree that materials not used for land application or other nutrient production are waste materials, but we assert that



byproducts of livestock production do have value and are not treated as wastes. This rule restricts the ability to treat manure as waste and requires that it be utilized as a nutrient source or for other beneficial use such as energy production. "Waste" is not an appropriate term. (LPRRG)

*Response:* The two primary ways in which the term waste is utilized in the rule is in referencing "waste liquids", which is a term that will be deleted from the rule because its meaning has been incorporated into the definition of "manure" by the legislature, and referencing "waste management system". Waste management system is a term that has been in common use under the existing rule and primarily refers to animal waste. We agree that properly applied or treated animal waste does have value however the term waste as used in the rule is primarily viewed from the perspective of the animal producing it, which has no further use for the excreta.

*Comment:* The term "manure release" is used but not defined. The term should be defined to ensure that farmers and IDEM interpret it in an identical manner. In [327 IAC 19-13-4](#), both "manure release" and "spill" are used to identify events that can be interpreted to be the same. Because both terms are used, we assume that they refer to different events. (LPRRG)

*Response:* The intention was to use the term "manure release" to refer to manure that has escaped from a storage structure or piece of equipment but has not yet reached a water of the state. Once a manure release reaches a water of the state it would be considered to be a "spill".

*Comment:* [327 IAC 19-2-8](#) "Contaminated runoff". We are still concerned about the meaning of "contaminated runoff," especially because of information from EPA. Because this rule will be enforced solely by IDEM, we need clarification on how IDEM will interpret this provision for CFOs. (LPRRG)

*Response:* It is not clear what aspect of the definition needs clarification. Its application is to rain or surface water that comes in contact with the new definition of manure at the production area, including roads leading up to the production area.

*Comment:* [327 IAC 19-2-23](#) "Manure". The definition of "manure" is not identical to the definition in House Enrolled Act 1187, effective on July 1, 2011 ([IC 13-11-2-126.5](#)). Rather than a complete definition of manure, the definition in the proposed rule refers to the definition of "waste liquid." For clarity, the definition of manure should be identical to HEA 1187 and "waste liquid" should be defined separately. (LPRRG)

*Response:* The statute has incorporated the items that were considered a "waste liquid" into the definition of "manure" so the term "waste liquid" will be deleted from the rule and the definition of "manure" will be revised to agree with the statute.

*Comment:* [327 IAC 19-2-29](#) "Owner/operator". While we appreciate IDEM's response to our earlier comment on this definition, we cannot agree on the meaning of this term and its purpose. This term should be clarified. (LPRRG)

*Response:* It is not clear from the comment what type of clarification is needed.

*Comment:* [327 IAC 19-2-40](#) "Staging". The phrase "at the site where the manure will be land applied" should be clarified. A farmer may find the best practice to be to create one staging area for manure which is to be applied to several fields on different parcels. We believe this definition will not restrict that activity, but the definition should make it clear that activity will be allowed. (LPRRG)

*Response:* IDEM agrees that the definition would not restrict the activity described. We do not feel the language needs to be changed.

*Comment:* [327 IAC 19-2-42](#) "Surface water" and [327 IAC 19-2-47](#) "Waters". The definition of surface water is broader than permissible under the definition of "waters." "Waters" as defined in statute ([IC 13-11-2-265](#)) includes both surface and underground water accumulations, but specifically excludes private ponds, off-stream ponds, reservoirs, and facilities built for reduction or control of pollution or cooling water prior to discharge. "Surface waters" appears to be a subset of "waters" and specifically includes ponds. Including water bodies excluded under [IC 13-11-2-265](#) in the definition of surface water is not legally allowable unless an actual discharge from the exempt feature would cause pollution of a regulated water, or where separate statutory authority exists. (LPRRG)

*Response:* This is a long-standing definition, the primary purpose of which was to draw a distinction between surface waters and ground water, especially in relation to setbacks. IDEM has never interpreted the definition of surface waters to extend beyond the statutory definition of waters. However, if a private pond has a hydraulic connection to any water of the state and a discharge into the private pond leads to a discharge to a regulated water, IDEM can certainly enforce against such a violation. We will change the references to "surface water" and "surface waters of the state" to eliminate the confusion.

### Performance Standards

*Comment:* [327 IAC 19-3-1](#)(a). We agree that CFOs should be managed to avoid unpermitted discharges to waters of the state. As long as the rule is followed, unpermitted discharges should seldom occur. While best management can be used on a farm, incidents may occur that are outside the farmer's control, such as natural catastrophes and severe weather. IDEM should use discretion in taking action against farmers for things beyond their control. (LPRRG)

*Response:* Such considerations are normally made in determining whether an enforcement action will be taken.

*Comment:* [327 IAC 19-3-1](#)(e). We are concerned with the requirement that manure be staged or applied in a

manner to prevent runoff or ponding for more than 24 hours. These may still occur even if the farmer takes all possible actions. The requirement should be amended to state that runoff and ponding should be minimized. (LPRRG)

*Response:* IDEM will consider making revisions to those requirements.

*Comment:* [327 IAC 19-3-1](#)(e). This subsection should be clarified with respect to "staged or applied at the CFO." Use of the term "CFO" means the livestock or poultry production area. We believe the term is being used to refer to fields for land application under the control of the CFO owner. The sentence should be revised to read: "staged or applied on land under control of the CFO owner/operator must. . ." (LPRRG)

*Response:* IDEM agrees with the interpretation and will make a revision.

*Comment:* [327 IAC 19-3-1](#). We agree with the no-discharge standard in this section. (TM)

*Response:* IDEM agrees.

### **General Approval Conditions**

*Comment:* [327 IAC 19-4-1](#)(c)(5). This adds a requirement for certification by a registered professional engineer if the commissioner determines it to be necessary. This should not be required as a matter of normal practice. There should be identifiable circumstances that trigger the requirement. Use of a registered professional engineer can greatly increase the cost to the producer without providing additional benefit over that provided by the construction oversight of IDEM personnel. (LPRRG)

*Response:* This requirement would only apply to special situations that warranted additional protections beyond the norm.

### **Alternate Design or Compliance Approach: Innovative Technology**

*Comment:* [327 IAC 19-5-1](#). We support provisions allowing for design or compliance approaches different from those in the rule. We urge the agency to allow for alternative design and compliance approaches that are different than those agency staff is familiar with or which are described in the rule. (LPRRG)

*Response:* If the alternative can be demonstrated to provide an equivalent level of protection it will be given serious consideration.

*Comment:* [327 IAC 19-5-1](#). The way this rule is written, alternative design and compliance will become the norm, not the exception. (MV)

*Response:* The basis for this comment is not understood.

### **Existing Confined Feeding Operations**

*Comment:* [327 IAC 19-6-1](#). We previously indicated concern that it may be difficult for existing operations to make changes before the effective date of the rule. IDEM acknowledged that there would be three months between final adoption of the rule and its effective date. While this may be sufficient for operations to make changes if they receive immediate notice of the new requirements, IDEM should be flexible in working with operations to achieve compliance with the new rules in a cordial and timely manner. (LPRRG)

*Response:* IDEM has demonstrated flexibility in the past as new rule requirements came into effect and it was acknowledged that understanding the new requirements would take some time.

### **Application Requirements**

*Comment:* [327 IAC 19-7-1](#)(a). "CFO" should be plural. (LPRRG)

*Response:* IDEM agrees and will make the change.

*Comment:* [327 IAC 19-7-1](#)(c)(8). The list of potentially affected parties was developed based on [IC 13-18-10-2](#) and [IC 13-15-8](#). [IC 13-18-10-2](#) refers to the specific notice requirements that the General Assembly created for CFOs. [IC 13-15-8](#) refers to providing notice more generally for permits issued under [IC 13-15](#). The intent of the General Assembly is clear and the group of individuals listed in [IC 13-18-10-2](#) are the only parties who are potentially affected parties. (LPRRG) (TJ)

*Response:* The Indiana Administrative Orders and Procedures Act ([IC 4-21-5](#)) requires IDEM to provide notice of a permit decision to each person who has a substantial and direct proprietary interest in the permit. In order for IDEM to compile that list of interested parties the rule asks that the applicant provide a list of individuals that were provided notice under the requirements of [IC 13-15-8](#) and [IC 13-18-10-2](#). The statute as written requires that both portions of the statute apply to anyone applying for a permit as well as anyone applying for a CFO approval.

*Comment:* [327 IAC 19-7-1](#)(d). The requirement that expanding CFOs must certify that there is sufficient acreage for land application should reference [327 IAC 19-14-2](#)(c) that allows for a demonstration that less acreage can be used. (LPRRG) (KW)

*Response:* IDEM agrees and will make a revision to the rule.

*Comment:* [327 IAC 19-7-1](#)(e). This subsection contains several reasons for which the commissioner may deny an approval application. An application may also be denied under [327 IAC 19-8-4](#). All conditions for denial should be listed in [327 IAC 19-8-4](#) which deals with denials. (LPRRG)

*Response:* IDEM agrees and will revise the rule language to merge the denial reasons together.

*Comment:* [327 IAC 19-7-2](#)(b)(4). We oppose the requirement to provide the names of landowners of parcels where manure will be applied. Many parcels are under the control of a farm manager or tenant farmer under a long-term lease. The requirement does not provide environmental protection but does allow opponents of

livestock production to easily target those individuals. The maps and field boundary information provide sufficient information for environmental decisions. (LPRRG) (TJ)

*Response:* It is currently common practice for this information to be provided on maps submitted to the agency for CFOs and it is necessary for IDEM to be able to correlate land use agreements with the acreage being represented as available for land application.

*Comment:* [327 IAC 19-7-3](#)(b) and (d). Under this subsection the farmstead plan must show the diversion of uncontaminated water. The rule's storm water management requirements require the CFO owner to implement storm water management practices but do not designate which practices must be used. The prescriptive requirement to document diversions is unwarranted. Storm water management issues should be addressed in [327 IAC 19-11](#). Identifying diversion of uncontaminated storm water on the farmstead plan for a CFO applying for a new permit is a new standard that allows IDEM personnel to understand the specific site that will be constructed and its potential effects on the environment. The storm water management requirements of the rule require the CFO owner to implement storm water management practices but do not designate what types of practices must be used. This documentation requirement is unwarranted and should be removed. All storm water management issues should be addressed under [327 IAC 19-11](#). (LPRRG) (KW)

*Response:* This is not a new requirement and has been required in the past under [327 IAC 16-7-9](#)(b). Having this information on the Farmstead Plan helps in the development of storm water management practices.

*Comment:* [327 IAC 19-7-3](#)(e). This subsection requires the farmstead plan to contain a reference to public roads. In subsection (a) there is a duplicative requirement that all public and private roads within 500 feet of waste management systems be included in the farmstead plan. (LPRRG)

*Response:* The purpose of this requirement was to provide a reference of where the structures are located relative to any roads in order to better understand the orientation of the facility. This requirement will be replaced with a requirement that true north be indicated on the Farmstead Plan so it may be correlated with the USGS map that already has true north indicated.

*Comment:* [327 IAC 19-7-3](#). The residences have been left out, and on a map, I think they should be accounted for. (BSC)

*Response:* IDEM agrees and will revise the rule language.

*Comment:* [327 IAC 19-7-5](#)(c). The rule requires that a soil test provide sufficient information on soil fertility to allow for nutrient recommendations for nitrogen, phosphorus, potassium and lime. It does not directly state that a soil nitrogen test should be done and we do not believe it should be interpreted to require such a test since they are largely unreliable in Indiana. We also question the inclusion of potassium and lime in soil testing since levels of potassium and lime needed will not vary widely because of manure application and the rule does not require that certain levels be maintained. (LPRRG)

*Response:* IDEM agrees and will revise this provision.

*Comment:* [327 IAC 19-7-3](#). The manure management plan should be incorporated into the actual permit or approval, and the soil testing requirements should be improved using best practices such as grid soil testing as called for by University Extension Services. We are curious about the change in soil testing from every three years to every four years, without explanation. (TM)

*Response:* By virtue of the Manure Management Plan being submitted with the approval application it is a part of the approval. Appropriate soil testing approaches vary considerably across the state due to the diverse soil types and distributions that exist. While grid testing may be appropriate in some areas it may not be in other areas. The soil testing frequency was revised to account for the common practice of crop rotation which is typically done on a 4 year cycle.

*Comment:* [327 IAC 19-7-5](#)(e). The language requiring manure sampling should be amended to state that a single manure sample may be used to represent multiple storage structures so long as the same production system is used for each facility. By using the same production system, the manure will be a consistent product and the nutrient value will be the same in each storage structure. (LPRRG)

*Response:* IDEM agrees and is revising the language.

*Comment:* [327 IAC 19-7-6](#)(b)(1)(A). The language should be amended to state that the sites should be constructed and operated to "minimize" rather than "prevent" leachate. The rule should recognize that complete prevention is a difficult standard to achieve. (LPRRG)

*Response:* IDEM agrees that it is difficult to prevent leachate. The intent of the requirement is to prevent movement of leachate through the base of the structure. The term will be changed from "leachate" to "leaching".

*Comment:* [327 IAC 19-7-6](#)(b)(1)(B). The rule requires that a compost site be constructed and operated to prevent access by rodents and domestic and wild animals. The concern about removal of carcasses from the compost site is not a water quality issue. This language should be removed because the rules of the Board of Animal Health are similar and are being revised to clarify the requirements for structure security to prevent animal access. (LPRRG) (JS)

*Response:* Having animal carcasses removed from a contained area and deposited in the open environment can be both a public health and an environmental concern.

## Approval Process

*Comment:* [327 IAC 19-8-2](#). We agree with the five year length of an approval, but the approval as written will be a period at least 30 days shorter than five years because of the requirement to submit a renewal application at least 30 days before expiration and the provision that the renewal begins on the submittal date. The renewal should begin on the date the previous approval expires. (LPRRG) (JS)

*Response:* IDEM will modify the language to allow future renewals to be valid for a full five year term.

*Comment:* [327 IAC 19-8-2\(c\)](#). A application for renewal includes a showing that the minimum number of acres are available for manure application. This should be amended to allow a showing that a smaller number of acres are needed as provided in [327 IAC 19-14-2\(c\)](#). (LPRRG)

*Response:* IDEM will modify the rule to reference all of [327 IAC 19-14-2](#) which will include the demonstration of smaller acreage.

*Comment:* [327 IAC 19-8-4\(a\)\(1\)](#). This subdivision should be revised to read "demonstrate that the CFO when constructed will be in compliance with approval conditions contained within this regulation; or. . .". (LPRRG)

*Response:* IDEM will revise this section by incorporating [327 IAC 19-7-1\(e\)](#).

*Comment:* [327 IAC 19-8-7](#). The time period for comment on an approval application should be shorter than 33 days. Comments are often upon issues which have no bearing upon whether the approval will be granted for a particular operation. The comments are often directed to issues outside of IDEM's scope or issues that should have been challenged during this rulemaking. Livestock and poultry producers should not bear the brunt of delays and costs caused by a lack of understanding about agricultural practices and the regulatory system. The permitting process should not be used to delay approvals. (LPRRG)

*Response:* It is IDEM's common practice to allow the public at least 30 days to comment on a proposed permit.

*Comment:* [327 IAC 19-8-7](#). We recognize IDEM's concern that all required information be given owners and occupants of neighboring land and the county executive using the required form. We believe that applicants should be allowed to use their own letter or form so long as all required information is provided. The applicant is responsible for providing all the information and would not receive the approval if the information is not provided. (LPRRG) (TJ)

*Response:* IDEM agrees and will revise the rule.

*Comment:* [327 IAC 19-8-7](#). Regarding public notice and opportunity for public comment, IDEM mentioned that they are limited by the provisions of [IC 13-18-10](#). We would also like to call your attention to [IC 13-15-5](#) which provides broader latitude for the type of public notice that IDEM provides. The CFO statute only addresses the notice that is provided by the applicant. (TM)

*Response:* Referencing [IC 13-18-10](#) was not intended to suggest a limitation but rather to identify the specific approach that the legislature has dictated for providing notice for CFOs. IDEM does publish a list of applications that are received on the agency website.

*Comment:* The rule does not go far enough in terms of giving the public adequate information during the application process. (JV)

*Response:* IDEM makes the complete application available to the public online by way of the Virtual File Cabinet.

### **Operating Record**

*Comment:* [327 IAC 19-9-1](#). The property owner may not have the right to contract for manure application if a tenant farmer has authority for those decisions in a separate contract. It is more appropriate for the land use agreement to be between the livestock or poultry producer and the individual with authority to contract for manure application. If the land is rented, a land use agreement signed by the tenant farmer along with a memorandum of the land lease for crop production should be sufficient. (LPRRG)

*Response:* IDEM agrees and will revise the rule language.

### **Ground Water Monitoring**

*Comment:* [327 IAC 19-10-1](#). The conditions that trigger ground water monitoring are still unclear, and applicants should understand the conditions which may lead to additional requirements. The conditions which are most prevalent, such as specific geologic or design criteria, should be listed in the rule, or the provision should be explained in more detail in a guidance document. (LPRRG)

*Response:* Because every facility is unique in its design and geologic setting it is difficult to provide very much specificity in the rule. From a historical perspective less than 1% of the currently permitted CFOs and CAFOs have been required to establish ground water monitoring. The situations where monitoring has been required involved large earthen lagoons that were located in permeable soils, or in close proximity to an aquifer formation that was being utilized in the area.

*Comment:* [327 IAC 19-10-1](#). The list of ground water monitoring constituents is excessive. If monitoring is necessary, a small subset of the list could be used as indicators to determine if further testing is necessary. The benefit of testing will not outweigh cost of testing to the farmer. (LPRRG) (MV)

*Response:* The cost to run the parameters listed, on one sample, is approximately \$170. The analysis cost for 5 monitoring wells would be less than \$1,000. IDEM does not believe such a cost is excessive when it is associated with a situation that warrants the installation of monitoring wells due to concerns with protecting



ground water resources.

*Comment:* [327 IAC 19-10-1](#). The presence of a listed criteria in a test does not mean that a manure storage structure is the source, and does not necessarily mean that human health or the environment are in jeopardy or that corrective actions need to be taken. (LPRRG)

*Response:* IDEM agrees with this statement and considers the purpose of the ground water monitoring to be an early warning system that triggers the need for further evaluation to identify the source of contamination.

*Comment:* [327 IAC 19-10-1](#). Sufficient data does not exist for farmers to be able to determine whether any changes are statistically significant. Guidance is needed to address this issue. Test results should be submitted to IDEM within 60 days and IDEM should determine if there is a statistically significant increase. (LPRRG)

*Response:* Determining the most appropriate type of statistical testing is a function of the number of sample points available. IDEM will provide guidance on choosing statistical tests. Results of running the statistical test may dictate the need for re-sampling or additional testing and it is best that the farmer be in control of making those determinations.

*Comment:* [327 IAC 19-10-1](#). If the farmer is responsible for determining a statistically significant increase, the results should only be submitted to IDEM if there is a statistically significant increase. If there is not, no information should be submitted to IDEM, including the test results, which should be kept on the farm as part of the operating record. (LPRRG)

*Response:* IDEM disagrees.

*Comment:* [327 IAC 19-10](#). The board should substantially clarify the language of [327 IAC 19-10](#) to provide specifics regarding: 1) who will need to perform ground water monitoring, 2) how often ground water monitoring will need to be performed, 3) what constitutes a significant increase, and 4) how compliance can be achieved when there is not sufficient data available to conduct a statistical analysis. The rule language is vague, requires needless data collection, and is functionally impossible to comply with. (SH)

*Response:* The development of the ground water monitoring plan will address all of these issues and thus provide flexibility in tailoring the requirements to the specific site. IDEM will provide guidance to assist farmers in developing an acceptable monitoring plan.

*Comment:* [327 IAC 19-10](#). It is unclear why field pH and field-specific conductance are required for monitoring, since there is no requirement to determine a statistically significant increase for these parameters. The addition of these parameters is overly burdensome for data that is not intended to be used. (SH)

*Response:* Field pH and field specific conductance are taken in the field to determine when adequate purging of the well has occurred to take a representative sample. Since this information is being gathered for that purpose it is appropriate for it to be provided.

*Comment:* [327 IAC 19-10](#). There is no standard to determine when a statistically significant increase may result in a corrective action or what that corrective action might be. (SH)

*Response:* The ground water monitoring plan will address this issue.

*Comment:* The rule does not require adequate reporting to help citizens monitor and detect the sources of water contamination in their communities. This rule fails to enhance the ability of citizens to understand and monitor the impact of these operations in their communities. (JV)

*Response:* Having ground water data from one potential source in a large area does not help to identify the actual source of contamination. Any contamination issue that is encountered requires identifying ground water flow directions and tracing the contamination back to the specific source.

### **Storm Water Management**

*Comment:* Although this is important and clearly identified in 40 CFR 412, it is not part of 40 CFR 122.23(e) as referenced in this rule. It sets a separate, more restrictive, standard for confined feeding operators, because 40 CFR 122.23(e) is specific to discharges from land application sites and adds storm water exemptions. As written, it would not require CAFOs to follow what I believe is IDEM's intent. This oversight puts an unnecessary burden on CFO operators. (MV)

*Response:* IDEM agrees that the citation is incomplete and will clarify the provision to reference 40 CFR 122.23(3), which provides that a large unpermitted CAFO may claim an agricultural stormwater exemption for a discharge of manure, litter or process wastewater only when it has been land applied in accordance with site-specific nutrient management practices that ensure appropriate nutrient uptake, as specified at 40 CFR 122.42(e)(1)(vi) through (ix); as well as 40 CFR 122.42 which requires the development of the nutrient management plan and documentation that the plan was followed and the effluent limitations under 40 CFR 412 are met. Note that the requirement of subsection (a) only applies to CFOs defined as CAFOs, not all CFOs. These operations that are defined as CAFOs but do not discharge must meet the requirements under the federal rule in order to ensure that a stormwater-related discharge meets the parameters of the agricultural stormwater exemption in order to not be considered to discharge and thus be required to obtain a NPDES permit.

*Comment:* [327 IAC 19-11-1](#). EPA does not refer to "storm water pollution prevention plans" in 40 CFR 122.23. Use of this Indiana-specific term could lead to confusion. The reference to 40 CFR 122.23(e) must include all requirements which could be considered by EPA to include provisions for managing storm water. (LPRRG)

*Response:* IDEM is amending this section to clarify the references to the federal rules.

*Comment:* [327 IAC 19-11-2](#)(a)(2). The recommendations for storm water management practices are vague. IDEM should develop guidance to assist farmers in determining which practices are available and what may work best for their operation. The phrase "immediate access roads and rail lines" should be clarified. We suggest restricting the provision to "immediate access roads and rail lines at the CFO." (LPRRG)

*Response:* IDEM will amend existing guidance to reflect the new rule requirements and give examples of situations and practices that can be adapted for various operations. We also agree with referencing roads and rail lines at the CFO.

*Comment:* [327 IAC 19-11-3](#). The storm water management requirements should be used to control real pollution issues such as contamination of storm water by contact with manure from animal handling areas, not to situations like small amounts of spilled grain or feed. (LPRRG)

*Response:* The rule is written to require consideration of all pollutant sources, even those some may consider insignificant. As the rule is written to apply to all variety of situations, it cannot list each situation that may arise as a possible pollutant concern. Guidance will be amended to provide examples and better explain options for stormwater management for different types of facilities.

*Comment:* The storm water management requirements are going to be burdensome and very expensive for producers to remain in compliance. Hopefully we can come up with some flexible best management practices that can be used and some guidance to help producers understand what is required within the storm water guidelines in the rule. (BS)

*Response:* Given that the main requirements for CFOs is to consider possible pollutant sources and maintain good management practices and engage in preventive maintenance to stop problems before they start, it is unclear how much more flexible the requirements of the section could be made. There is ample flexibility written into the rule for each CFO to consider its individual situation and come up with practices more useful for the CFO to manage stormwater runoff.

*Comment:* [327 IAC 19-11](#). This provision was substantially changed from the second notice version, and I believe it needs more review and thought. There should be specific reference to best practices guidance concerning storm water management. There is plenty of that guidance available from NRCS, from Purdue, and from IDEM. (TM)

*Response:* IDEM believes all such guidance would be helpful to CFOs but did not feel that any one guidance should be incorporated into the rule. The rule is written to allow for flexibility in dealing with the site-specific situations at each CFO. IDEM encourages the review of NRCS and other guidance documents such as those published by Purdue when each CFO is considering how to manage stormwater.

### **Manure Handling and Storage, Site, Design, and Construction Requirements for Waste Management Systems**

*Comment:* The fees for manure application are not sufficient. Taxpayers are subsidizing the time it takes IDEM to supervise them. (BSC)

*Response:* The fees are set by statute and the board cannot amend them without a statutory change.

*Comment:* Animal production has health risks related to the large amount of manure produced. The construction standards in the rule would allow a three acre lagoon to leak as much as 1,853,371 gallons of manure into the ground water due to allowed seepage. (BSC)

*Response:* Seepage into the soil does not equate to contamination of groundwater. In situations where the groundwater may become or has been impacted by a CFO, groundwater monitoring requirements of the rule would be utilized.

*Comment:* Construction should be certified by registered engineers, and out of state engineers should not be allowed to certify construction. (BSC)

*Response:* The rule requires that construction be certified by a registered professional engineer who is registered in the State of Indiana.

*Comment:* [327 IAC 19-12-2](#). The complete prohibition on construction over mines is unwarranted. The rule should contain a provision for construction over mines that is similar to that for construction in karst terrain. Solid manure structures should be allowed to be constructed over mines. (LPRRG) (JS)

*Response:* This is a long-standing restriction in the CFO rules. However, the alternate design section of the rule, [327 IAC 19-5-1](#) would allow innovative design approaches to be considered and possibly approved.

*Comment:* [327 IAC 19-2-2](#). Construction of waste management systems in karst terrain or flood plains should be prohibited. Karst terrains are very sensitive systems and based on the language in the rule we are not confident that those could be implemented without creating a serious risk to underground karst waters. (TM)

*Response:* Construction in karst or floodplains is prohibited except in very limited circumstances where design and construction standards can be demonstrated to the satisfaction of the commissioner to be protective of the environment.

*Comment:* [327 IAC 19-12-3](#)(b). The 300 foot setback from "surface waters" could be applied to puddles, swales and private ponds with no discharge to waters of the state. The setback should not apply to those features. (LPRRG) (JS)

*Response:* As this long-standing setback requirement to surface waters has never been interpreted to include puddles, IDEM believes this concern is not warranted. The setback is designed to protect Indiana's waters, which are already sufficiently defined in rule and statute. See the response to the comment on the definition of "surface waters" in [327 IAC 19-2-42](#).

*Comment:* [327 IAC 19-12-3](#)(c). We believe this subsection requires manure storage structures holding solid manure to maintain a 100 foot minimum setback. By using the phrase "contains solids", the language could be read to mean liquid manure which contains solids. (LPRRG)

*Response:* IDEM agrees and will modify the language to clarify the intent of the section.

*Comment:* [327 IAC 19-12-3](#). We recommend a 1,500 foot setback from public water supply wells or public water supply surface intakes, and we recommend a minimum setback of 500 feet from surface waters of the state, drainage inlets, sinkholes, and off-site water wells. (TM)

*Response:* IDEM believes the setback distances proposed are protective of Indiana's waters.

*Comment:* [327 IAC 19-12-4](#)(d). The requirement to have a professional engineer certify all manure storage facilities is overly burdensome and costly. This provision may be appropriate for a facility that requires a liner, but it is unnecessary for the majority of structures. The design and construction of the majority of facilities are similar or identical, the materials are predictable and the contractors are familiar with the structures. IDEM staff can review each structure before it is placed in service. Since few professional engineers would certify a facility without also designing it, having a professional engineer design the facility becomes a requirement of the rule. (LPRRG)

*Response:* IDEM believes that a certification of proper construction is essential in assuring that facilities are constructed as designed. IDEM does not have staff to inspect each manure storage facility before it is put into service and requiring facilities to wait for such an on-site inspection would prove more burdensome and costly to owners and operators. Because adherence to design and construction standards is vitally important in the proper operation of a CFO, IDEM believes this requirement is an important method to assure long-term environmental protection.

*Comment:* [327 IAC 19-12-4](#)(d). I am concerned with the limited role for the professional engineer laid out here, as it puts the professional engineer at risk because they have limited the engineer's role to construction and not the whole process. (MV)

*Response:* IDEM is attempting to weigh the costs of an engineer's time with the necessity to assure proper construction. As standard NRCS design and construction requirements are incorporated into the rule, IDEM does not believe that a registered professional engineer would be unable to certify that the standards required under these rules have been met.

*Comment:* [327 IAC 19-12-4](#)(e). We are concerned that TR-9: Circular Concrete Manure Tanks, March 1998, is an outdated technical resource. It should be replaced with "Circular Concrete Tanks Without Prestressing," ISBN 0-89312-125-8, Portland Cement Association, 1993. (LPRRG)

*Response:* The rule references MWPS-36 for rectangular concrete structures, and TR-9 for circular concrete structures is a companion document that is cross-referenced with MWPS-36. For consistency reasons IDEM believes that the TR-9 is an appropriate reference to use.

*Comment:* [327 IAC 19-12-4](#)(f). Because not all earthen manure storage structures are lagoons, the phrase "constructed with the intent to treat manure" should be inserted between the words "facilities must". (LPRRG)

*Response:* The rule language will be changed to clarify that the reference is to lagoons.

*Comment:* [327 IAC 19-12-4](#)(g). We question the restriction of constructing manure storage facilities that contain solids in sand and gravel soils. Why was this included and what does it mean? (LPRRG) (MV)

*Response:* This subsection will be clarified to refer to manure storage facilities that contain solid manure.

*Comment:* [327 IAC 19-12-4](#)(i). NRCS Conservation Practice Standard Code 634: Waste Transfer, October 2010, should be substituted for NRCS Conservation Practice Standard Code 516: Pipeline. The pipeline publication is for the movement of clean water. (LPRRG)

*Response:* This reference will be changed.

*Comment:* [327 IAC 19-12-4](#)(k)(3). The requirement to clean tanks which have been used to store other substances prior to use for manure storage is excessive in some circumstances. If the tank had been previously used to store hazardous substances, traces of the prior substance would need to be removed. However, if the tank previously held a substance similar to manure, such as fertilizer, there is no threat to human health or the environment being created by failing to remove all traces of the substance. This provision should be rewritten to generally require that tanks be cleaned so that hazardous substances are removed prior to addition of manure to the tank. (LPRRG)

*Response:* IDEM agrees and will amend the subsection to clarify.

*Comment:* [327 IAC 19-12-4](#)(l). Vegetative infiltration basins should be authorized by this rule. If they are not included in Practice Standard Code 635, a separate technical resource should be referenced. (LPRRG)

*Response:* Any management system not specifically authorized by incorporated standards may still be used so long as it can be shown to the satisfaction of the commissioner to meet all requisite performance standards and be protective of the environment.

*Comment:* [327 IAC 19-12-4](#)(o)(3). The requirement for a backup pump is unnecessary as long as the operator has access to a separate pump that can be used if the primary pump fails. (LPRRG)

*Response:* A backup pump is not specifically required by that subdivision as the wording states these must be provided "if applicable".

*Comment:* [327 IAC 19-12-4](#)(o). While we recognize that the outlet of groundwater should not be done in a manner to impact adjacent property owners, the restriction that an outlet must be either twenty or fifty feet from a property line may be excessive if the water can be safely placed into a ditch or creek which is within the setback and will carry the water away. The setback from property lines should not exist if the adjoining property is owned by the owner/operator of the CFO. (LPRRG)

*Response:* IDEM agrees and will amend that section to allow for waived setbacks if the adjoining property is owned or operated by the CFO.

*Comment:* [327 IAC 19-12-4](#)(s). We do not believe that the current version of this rule requires that an affidavit announcing completion of construction of the manure management system be notarized. However, we are under the impression that the form which IDEM requires does have such a requirement. Why is the use of a notary required in subsection (s)? Legal documents are often submitted under penalty of perjury without the requirement that the document be notarized. There is no value to be gained by seeking the signature of a notary but there is increased cost and time involved in doing so. (LPRRG)

*Response:* It is a long-standing agency-wide practice requirement to require all affidavits to be notarized. To date IDEM has not received complaints regarding this being an undue burden on the applicant.

*Comment:* [327 IAC 19-12-5](#). The rule would read more clearly if the requirement that clay liners be a minimum of one foot thick contained in (c) was instead included in (b). The provision regarding clay liners should not be treated as an exception to the technical references in (b) but as an additional method of sealing which may be implemented. (LPRRG)

*Response:* IDEM agrees that the language could be clearer to reflect that a variety of liners may be used to meet the requirements of the section and will amend the section to make it read more clearly.

*Comment:* [327 IAC 19-13-2](#). The General Assembly has established a program for regulation of digesters and gasifiers that use agricultural sources of biomass (HEA 1187). Under HEA 1187, digesters and gasifiers using only biomass as the source of energy should no longer be regulated under the solid waste program. Because the digester or gasifier will be part of the manure management system at a CFO, its design, construction and operation will be subject to approval of IDEM under the CFO program. (LPRRG) (JS)

*Response:* IDEM agrees and will amend the language to bring the rule into agreement with the provisions of HEA 1187 that become effective on July 1 of this year.

*Comment:* We recommend inclusion of best management practices for reduction of pathogens entering our water supplies, such as those available from Purdue University and the University of Minnesota. (TM)

*Response:* IDEM continues to investigate the inclusion of any BMPs that will provide better public and environmental protection. IDEM believes at the design, construction and operational requirements of this rule do provide protection for water supplies from nutrients and pathogens.

#### **Emergency Response Plan**

*Comment:* [327 IAC 19-13-4](#). It is necessary to define "manure release" as it is a new term and has been used to largely replace "spill" when discussing emergency response plans. (LPRRG)

*Response:* The intention was to use the term "manure release" to refer to manure that has escaped from a storage structure or piece of equipment but has not yet reached a water of the state. Once a manure release reaches a water of the state it would be considered to be a "spill". While the requirements of the existing spill rule would apply to a CFO, a manure release is more reflective of the actual operations at a CFO. The terms are commonly defined and no additional definitional clarification should be necessary.

#### **Land Application of Manure: General**

*Comment:* [327 IAC 19-14-3](#). IDEM should work with Purdue University with respect to nitrogen recommendations for crop production and reasonable nitrogen losses to ensure that the information being used is based upon current scientific information. By providing better clarity and developing current materials, farmers who are applying manure and the agency staff will be able to interpret this provision in the same manner. (LPRRG) (JS)

*Response:* IDEM has worked with Purdue and interested producers to develop the land application table currently in the rule. In fact the suggestion for such a table came from commentors, including NRCS and Purdue. There is an allowance for nutrient losses under [327 IAC 19-14-3](#)(b).

*Comment:* [327 IAC 19-14-3](#)(c). IDEM should use the updated March 2008 version of AWMFH Chapter 4. (LPRRG)

*Response:* This reference will be updated.

*Comment:* [327 IAC 19-14-3](#). The rule does not allow for a demonstration of soil loss below the allowable T when the soil test level is between 200 and 300 ppm in year seven and beyond. By allowing for this showing, farmers can demonstrate that an application of phosphorus will still be protective of the environment. (LPRRG)

*Response:* Neither the current rule nor the proposed rule allow for site risk considerations in determining the



application of phosphorus to a field with high phosphorus levels.

*Comment:* [327 IAC 19-14-3](#), Table 2. We also suggest, for the clarity of those following the rule, that the year references in Table 2 be indicated by actual calendar years. As an example, assuming that this rule becomes effective at the end of 2011, the first column for application years would read "2012-2013." This would eliminate the guesswork of which year in the chart is to be followed. (LPRRG)

*Response:* IDEM will review the chart and make a determination whether adding actual calendar years would be more useful for those using the chart.

*Comment:* [327 IAC 19-14-4\(b\)\(3\)](#). Staging of manure in a flood plain can be protective of human health and the environment so long as certain factors are considered. A landowner should be able to stage manure for a limited period of time in a flood plain if conditions such as weather forecasts, river levels, and recent rainfall for both the application location and upstream watersheds are considered. (LPRRG)

*Response:* An allowance for short-term staging in a flood plain will be added.

*Comment:* [327 IAC 19-14-4\(c\)](#). The restriction in 19-14-4(c) that manure, litter or bedding cannot be placed outside over night is unwarranted. It may take more than one day to clean out a large building, and leaving the material outside over night does not create an environmental risk. Inclement weather is a legitimate concern to which this restriction should be limited. (LPRRG)

*Response:* IDEM will review the provision and determine whether a specific time-frame, such as a number of hours might be more of a functional restriction. In no case should manure or contaminated materials be placed outside in inclement weather or during the threat of inclement weather.

*Comment:* [327 IAC 19-14-4\(l\)](#). The exclusion from enforcement for pollution events caused by storm water or irrigation return flows found in (l) does not match the language found in HEA 1187. Given that the General Assembly has spoken to the issue, we believe that the language should be identical. (LPRRG) (JS)

*Response:* As HEA 1187 was in its formative stages when this draft of the rule was completed, IDEM intends to amend the rule to make it conform to the requirements of HEA 1187, which becomes effective on July 1 of this year.

*Comment:* [327 IAC 19-14-5](#). In the response to previous comments regarding the spray irrigation of manure, IDEM stated that so long as spray irrigation is conducted to prevent excessive application, occasional ponding and slow infiltration should not rise to the level of a violation. We agree with this statement. Nevertheless, we are concerned that an inspector could interpret the regulation in such a way that a livestock or poultry producer could be found to be in violation of this provision even though the ponding is occasional and the infiltration occurring slowly. (LPRRG)

*Response:* Inspectors will be provided with ample information on the rule requirements that such interpretations should not occur. Additionally, it is not solely the inspector who determines what purported violations are sent through the enforcement process, therefore the judgment of a single person would not determine such a violation.

*Comment:* [327 IAC 19-14-5\(d\)\(3\)](#). The requirements in (d)(3) are sufficient to protect human health and the environment when spray irrigation is done in a flood plain. Since they take into account the expectation of flooding, there is no reason to determine whether the NRCS soil data mart indicates that there is a low potential for flooding. Trends are less reliable than real time data. (LPRRG)

*Response:* IDEM believes that the unique nature of floodplains makes it especially important that spray irrigation be done in a manner that assures protection from potential flooding. To that end the NRCS soil data mart is a good tool to aid in that assessment.

*Comment:* [327 IAC 19-14-6](#). There are several references made to surface waters of the state in the manure application setbacks. As we previously commented, "surface waters" is an overly broad and somewhat ambiguous regulatory term. (LPRRG)

*Response:* This is a long-standing definition, the primary purpose of which was to draw a distinction between surface waters and ground water, especially in relation to setbacks. IDEM has never interpreted the definition of surface waters to extend beyond the statutory definition of waters. However, if a private pond has a hydraulic connection to any water of the state and a discharge into the private pond leads to a discharge to a regulated water, IDEM can certainly enforce against such a violation.

*Comment:* [327 IAC 19-14-7\(d\)](#). Reference is made to two certifications which must be obtained prior to receiving manure from a CFO. The first is a nutrient application certification and the second are all applicable certifications from the Office of the State Chemist. We are aware of only one certification, the fertilizer material applicator certification from the Office of the State Chemist. The provision needs to be rewritten to clarify that only one certification is required or it needs to more clearly state what the required certifications are and where they may be obtained. (LPRRG)

*Response:* As written, the rule specifies that any certifications necessary from the OSC must be obtained. If only one certification is necessary then the parameters of the rule are met. The rule serves as a reminder that the office of state chemist regulates the application of fertilizer, including manure, onto the land in Indiana. Anyone applying fertilizer or manure should be aware of the requirements from the OSC and should read those requirements independently from this rule.

*Comment:* [327 IAC 19-14-7](#)(f). The proposed regulation requires that in order to receive the waiver of land acreage requirements, certain records must be provided including the amount of manure produced, the amount marketed by the facility, and the amount that was land applied. Given that some of the marketing agreements may not be based upon past marketing practices, the provision should be rephrased to state that it includes projected amounts of manure produced, manure marketed, and manure to be land applied. (LPRRG)

*Response:* IDEM will clarify the waiver conditions.

*Comment:* [327 IAC 19-14-7](#)(f). There is some question of the scope of the phrase "that was land applied." Is this seeking to obtain information about the amount of manure applied to land under the control of the CFO, or is it seeking to find how much of the marketed manure was land applied? It is possible that marketed manure may not be land applied if it is used in a digester or gasifier. Further, some manure may be pelletized and enter the market as turf fertilizer. The critical concern is that if the amount of manure land applied and amount marketed are to equal the total produced, the provision must be clear in explaining the land application information which is needed. (LPRRG)

*Response:* IDEM agrees that the language should be clarified to reflect the amount of manure that was land applied by the CFO or under the control of the CFO. The owner operator is only responsible for meeting the requirements for marketed manure found in the rule. [327 IAC 19-14-2](#)(c) allows additional flexibility.

*Comment:* [327 IAC 19-14-4](#)(b)(3). Challenges are raised by the strict setback requirements from all waters especially in (b)(3) where there is a prohibition on staging manure in standing water. On nearly level fields in which the water ponds rather than flows away during rain events, it is possible that standing water may accumulate in the area where the manure is staged. That should not be treated as a violation so long as waters of the state are not polluted. (LPRRG)

*Response:* Generally the topography of land is such that areas where water accumulates are readily apparent. These areas should be avoided when staging manure.

*Comment:* The rule says that if a waste management system discharges to a water of the state, then that automatically will trigger an NPDES CAFO permit requirement. That same requirement should apply to land application. If there is a discharge to a water of the state from land application, that should also trigger an NPDES CAFO permit requirement. (JH)

*Response:* Any discharge to a water of the state triggers an investigation of whether a NPDES CAFO permit is required. Runoff that occurs at a land application site caused by a storm event does not trigger the requirement to get an NPDES permit if the land application is done in accordance with these rules. As a point of clarification, any discharge to a water of the state from a waste management system triggers an investigation of whether an NPDES CAFO permit is required. Each case must be reviewed based on the individual circumstances surrounding it.

#### **Application to Frozen or Snow-Covered Ground**

*Comment:* [327 IAC 19-14-4](#). We are extremely concerned about the restriction on application of manure on frozen and snow covered ground. For many operations that were permitted with less than 180 days storage, application to frozen and snow covered ground is a necessity. While we agree that application may be needed because of natural disasters, extreme weather conditions, or equipment or structural failure, the need to apply because of the size of approved manure storage structures should not be discounted. We acknowledge the provision in (i), which is consistent with the information we have received from EPA, that the restrictions do not apply if injection or same day incorporation can be achieved. However, we do not believe that this provision sufficiently addresses the needs of those operations which were constructed according to the rules in place when they were approved. Those facilities are older facilities where construction of new manure storage structures is not likely an economically feasible venture. Requiring additional storage could result in many of those operations closing, impacting the farmers who raise the livestock and poultry at those farms. (LPRRG)

*Response:* IDEM agrees that operations with approved storage of 120 days or less may have difficulty meeting the winter-time restrictions in the rule. IDEM will amend the language to allow the commissioner to approve land application on a case-by case basis for those operations not defined as large CAFOS that have less than 120 days of storage. The approval would be available as long as the farm continues to operate as permitted and does not cause a discharge of manure to waters of the State.

*Comment:* [327 IAC 19-14-4](#). A key consideration for our belief that applications to frozen and snow covered ground should not be entirely restricted to emergency situations is the concession that conditions should be in place. We support the conditions listed in (h)(3). Those provisions will ensure that human health and the environment are protected regardless of the reasons for the application to frozen or snow covered ground. Historically, there has not been a problem caused by application to frozen and snow covered ground in Indiana. Those states where incidents have occurred are our neighbors to the north where the soil freezes to extreme depths rather than in the vast majority of Indiana where we have frequent freeze and thaw cycles. With these frequent cycles, the risk that the ground will freeze to substantial depths such that a manure run-off event will occur is minimal at best. Thus, we suggest that CFOs be allowed to apply manure to frozen and snow covered ground so long as they follow the guidelines in (h)(3). (LPRRG)

*Response:* IDEM believes that sufficient flexibility has been built into the rule to allow operations to plan

around the restrictions on winter-time spreading. An emergency provision as well as a case by case approval for operations with approved storage capacity of 120 days or less has been added to the draft rules to aid operations having difficulty meeting the requirements of the rule.

*Comment:* [327 IAC 19-14-4](#). Allowance should be made for grandfathering of those facilities which were constructed under previous versions of the rule and who do not have adequate storage capacity to ensure that they can make it through the winter without some application to frozen and snow covered ground. Facilities with adequate available storage would still be subject to the emergency application provisions, but those facilities who cannot get through the winter because of their storage capacity would be allowed to make minimal applications to maintain adequate storage capacity. (LPRRG)

*Response:* IDEM agrees that operations with approved storage of 120 days or less may have difficulty meeting the winter-time restrictions in the rule. IDEM will amend the language to allow the commissioner to temporarily approve land application on a case-by case basis for those operations not defined as large CAFOS that have less than 120 days of storage. The approval would be available as long as the farm continues to operate as permitted and does not cause a discharge of manure to waters of the State.

*Comment:* [327 IAC 19-14-4](#). If this section is not changed, we urge IDEM as well the Governor and other agencies to provide financial assistance to the farmers who are forced to build additional storage. Without the financial assistance, there will likely be a financial hardship which they will not be able to overcome. (LPRRG)

*Response:* IDEM will revise the requirements as described in the previous comment.

*Comment:* [327 IAC 19-14-4](#)(e). In (e), there is a general prohibition on large CAFOs from the application of manure to frozen and snow covered ground. The CAFO NPDES rule at the federal level does not specifically prohibit application by large CAFOs. Rather, guidance which has been issued by the EPA states that application to frozen and snow covered ground is prohibited. Additionally, the guidance states that applications will be allowed on an emergency basis, although an individual will be found to be in violation of their NPDES approval. We do not agree with the interpretation of EPA that every application to frozen and snow covered ground automatically results in a discharge to waters of the US. Thus, we believe that the interpretation of EPA is inappropriate and legally challengeable. That being said, we believe that the provision found in (i) which states that the restriction on application to frozen and snow covered ground does not apply if injection or same day incorporation can be achieved should also apply to large CAFOs. This is consistent with information we have received from staff at Region 5 EPA. (LPRRG)

*Response:* IDEM cannot speak to EPA interpretations of federal rules. This requirement merely repeats what the federal rule states. CFOs defined as large CAFOs under the federal rule that have a discharge from such an application may be required to obtain a NPDES permit. IDEM will add a clarification that the restriction on application to snow covered or frozen ground does not apply if the manure can be injected or incorporated the same day.

*Comment:* [327 IAC 19-14-4](#)(e) through (h). The board should modify the language of [327 IAC 19-14-4](#)(e) through (h) to allow the application of manure onto frozen or snow-covered ground at all farms regardless of size, when constructed in accordance with a management plan that includes a field based suitability and risk assessment. This prohibition treats large and small farms unequally and limits operational flexibility. Risk based application to frozen ground is appropriate. (SH)

*Response:* This rule attempts to take into consideration the differing storage requirements inherent in the evolution of the regulatory program. CFOs that meet the definition of CAFO under the federal rules but do not maintain a NPDES permit have certain requirements they must meet in order to not have to maintain the NPDES permit. Thus there are differing requirements based on size.

*Comment:* About 85% of currently permitted facilities were originally built when 90 or 120 day storage requirements were in place. It can be very difficult to make it through the season without some sort of controlled application to frozen or snow-covered ground. Injection and same day incorporation may not be feasible for some smaller operations. Hopefully we can find ways to be flexible with producers that, under controlled conditions, we can do some application to frozen ground. (BS) (JS) (KW)

*Response:* IDEM agrees that operations with approved storage of 120 days or less may have difficulty meeting the winter-time restrictions in the rule. IDEM will amend the language to allow the commissioner to approve land application on a case-by case basis for those operations not defined as large CAFOS that have less than 120 days of storage. The approval would be available as long as the farm continues to operate as permitted and does not cause a discharge of manure to waters of the State.

*Comment:* How will frozen ground be defined in the guidelines? (JS)

*Response:* IDEM will be reviewing guidance to update it and provide real-life examples of such concepts. In the absence of that, it is really more of a performance standard than a specific definition. If the ground is too hard to allow for incorporation or allow liquids to seep into the soil, it is likely frozen.

### **Phosphorus Based Manure Application Limits**

*Comment:* [327 IAC 19-14-3](#). We are concerned that large CAFOs who currently have CFO approvals not be required to apply manure according to Table 1 but that they be given the opportunity to follow the phase-in approach provided in Table 2. This group of CAFOs does not currently have to apply manure with phosphorus as

a limiting nutrient, and we believe that a phase-in period will allow them the opportunity to transition into this more stringent requirement. (LPRRG) (KW)

*Response:* CAFOs built after 2003 are already subject to phosphorus limitations through their CAFO permit. IDEM estimates that there are approximately 150 such farms. The remaining approximately 450 farms have not been subject to a phosphorus limitation and IDEM agrees with allowing those farms to phase into the phosphorous limitations in Table 2. The rule will be revised to reflect this change.

*Comment:* [327 IAC 19-14-3](#). We are concerned because the rule does not specifically acknowledge the necessity and viability of applying multiple years' worth of phosphorus in one application. It is clear based upon the table in the rule that when the soil test levels are 50 ppm or below, there is no restriction. Outside of that initial level, there is no reason why multiple years' worth of phosphorus could not be applied in a manner that is protective of the environment. Given the nutrient content of manure, nitrogen will generally limit the amount of phosphorus to the amount needed over a period of three to four years. Once an application is made, subsequent applications could be restricted until the phosphorus which has been applied is utilized. Without this allowance, it will not be economically viable to apply manure. Nitrogen rates would be so low that subsequent applications of nitrogen would have to be made to the same field, taking away the ability to meet annual nitrogen demands with one application which increases cost of production, compaction, and disturbance to the soil. (LPRRG) (KW)(DH)

*Response:* IDEM acknowledges that banking of phosphorus has some environmental benefits as the manure may be spread on a fourth of the land area required if banking were not allowed. Therefore reducing air emissions from application equipment and reducing the surface area subject to runoff during rain events. In light of these benefits IDEM is open to additional consideration for allowance of some banking under the rule. Documentation in on-site records, additional soil testing or restrictions of banking to fields that meet a specific risk assessment are all considerations that may accompany an allowance for banking. There is an allowance for nutrient losses under [327 IAC 19-14-3\(b\)](#).

*Comment:* [327 IAC 19-14-3](#). The board should remove or substantially modify the language of [327 IAC 19-14-3](#). The Indiana State Chemist is authorized under [IC 15-16-2-44](#) to regulate phosphorus application. The environmental benefit of this rule is speculative, and the nitrogen based application rate provides sufficient environmental protection. This standard puts Indiana farms and large farms at a competitive disadvantage. No specific regulatory authority exists to regulate phosphorus application. Regulating phosphorus is redundant since the State Chemist is the appropriate regulatory body. This rule will double the necessary land base for manure application and cost the dairy industry \$241,000. (SH)

*Response:* Phosphorus is a nutrient that causes water quality problems when it is discharged into waters of the state. IDEM has specific authority to regulate the discharge of pollutants into waters of the state as well as regulating the operations of CFOS, including regulation of manure application. The office of state chemist regulates land application of all fertilizer, including manure. IDEM has worked with the OSC to assure that regulations are in concert and provide a level playing field for the application of manure as a nutrient as well as chemical fertilizer. IDEM is however open to further discussion and revisions to the rule relative to banking of phosphorus and application of the phase in requirements.

*Comment:* [327 IAC 19-14-3](#). The proposed phosphorus rule does not comply with [IC 13-18-10-4](#) because it does not actually assist in reducing the potential for manure to be conveyed off-site by runoff or soil erosion. The limits are too strict to accomplish that, and the current nitrogen standard is sufficient to protect from potential runoff and erosion. IDEM is not mandated to impose these standards and surrounding states do not impose them. The phosphorus standard puts Indiana producers at a competitive disadvantage. (DMcl)

*Response:* IDEM disagrees. Currently all federally regulated CAFOs are required to land apply manure at a phosphorus limiting rate. The current rule does comply with [IC 13-18-10](#). IDEM is open to revisions to the phosphorus application rates in the rule.

## [327 IAC 16](#); [327 IAC 19](#)

SECTION 1. [327 IAC 19](#) IS ADDED TO READ AS FOLLOWS:

### ARTICLE 19. CONFINED FEEDING OPERATIONS

#### Rule 1. General Provisions

##### [327 IAC 19-1-1](#) Purpose

**Authority:** [IC 13-14-8-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2](#); [IC 13-18-10](#); [IC 13-22](#)



**Sec. 1. The purpose of this article is to:**

- (1) impose construction and operational requirements for CFOs in order to implement [IC 13-18-10](#); and**
- (2) protect human health and the environment from threats to water quality.**

*(Water Pollution Control Board; [327 IAC 19-1-1](#))*

#### **[327 IAC 19-1-2](#) Applicability**

**Authority:** [IC 13-14-8-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2-40](#); [IC 13-18](#); [IC 13-22](#)

**Sec. 2. (a) This article applies to all CFOs as defined in [IC 13-11-2-40](#).**

**(b) Under this article a person may not start:**

- (1) construction of a CFO; or**
- (2) expansion of a CFO that increases animal capacity or manure containment capacity, or both; without obtaining the prior approval of the department.**

**(c) Unless otherwise stated, all requirements of this article must be met upon its effective date.**

*(Water Pollution Control Board; [327 IAC 19-1-2](#))*

#### **[327 IAC 19-1-3](#) Appeal of decisions**

**Authority:** [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 4-21.5](#); [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 3. A decision by the commissioner to approve, deny, revoke, amend, require an approval, or impose additional requirements under this article is appealable under [IC 4-21.5](#). Information on appeal rights shall be provided with the documentation of the commissioner's decision.**

*(Water Pollution Control Board; [327 IAC 19-1-3](#))*

### **Rule 2. Definitions**

#### **[327 IAC 19-2-1](#) Applicability**

**Authority:** [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 1. The definitions in [IC 13-11-2](#) and this rule apply throughout this article.**

*(Water Pollution Control Board; [327 IAC 19-2-1](#))*

#### **[327 IAC 19-2-2](#) "Agronomic rate" defined**

**Authority:** [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 2. "Agronomic rate" means a rate of application of manure to the land based on:**

- (1) the nutrient content of the manure to be applied;**
- (2) the fertility level of the soil;**
- (3) the nutrient needs of the current or planned crops;**
- (4) the nutrient holding capacity of the soil; and**

**(5) additional sources of nutrients, including legume credits, process wastewater, biosolids, or commercial fertilizer.**

*(Water Pollution Control Board; [327 IAC 19-2-2](#))*

**[327 IAC 19-2-3](#) "Animal feeding operation" or "AFO" defined**

**Authority:** [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 3. "Animal feeding operation" or "AFO" means a lot or facility, other than an aquatic animal production facility, where all of the following conditions are met:**

- (1) Animals, other than aquatic animals, have been, are, or will be stabled or confined and fed or maintained for a total of forty-five (45) days or more in any twelve (12) month period.**
- (2) Crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over at least fifty percent (50%) of the lot or facility.**

*(Water Pollution Control Board; [327 IAC 19-2-3](#))*

**[327 IAC 19-2-4](#) "Bedrock" defined**

**Authority:** [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 4. "Bedrock" means cemented or consolidated earth materials exposed on the earth's surface or underlying unconsolidated earth materials.**

*(Water Pollution Control Board; [327 IAC 19-2-4](#))*

**[327 IAC 19-2-5](#) "Commissioner" defined**

**Authority:** [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2-35](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 5. "Commissioner", as defined in [IC 13-11-2-35](#), refers to the commissioner of the department of environmental management.**

*(Water Pollution Control Board; [327 IAC 19-2-5](#))*

**[327 IAC 19-2-6](#) "Confined feeding" defined**

**Authority:** [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2-39](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 6. (a) "Confined feeding", as defined in [IC 13-11-2-39](#), means the confined feeding of animals for food, fur, or pleasure purposes in lots, pens, ponds, sheds, or buildings where:**

- (1) animals are confined, fed, and maintained for at least forty-five (45) days during any twelve (12) month period; and**
- (2) ground cover or vegetation is not sustained over at least fifty percent (50%) of the animal confinement area.**

**(b) The term does not include the following:**

**(1) A livestock market:**

- (A) where animals are assembled from at least two (2) sources to be publicly auctioned or privately sold on a commission basis; and**
- (B) that is under state or federal supervision.**

(2) A livestock sale barn or auction market where animals are kept for not more than ten (10) days.

(Water Pollution Control Board; [327 IAC 19-2-6](#))

**[327 IAC 19-2-7](#) "Confined feeding operation" or "CFO" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 4-21.5](#); [IC 13-11-2-40](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10](#); [IC 13-30](#)

Sec. 7. "Confined feeding operation" or "CFO", as defined in [IC 13-11-2-40](#), means any:

(1) confined feeding of at least:

- (A) three hundred (300) cattle;
- (B) six hundred (600) swine or sheep;
- (C) thirty thousand (30,000) fowl; or
- (D) five hundred (500) horses;

(2) AFO electing to be subject to [IC 13-18-10](#); or

(3) AFO that is causing a violation of:

- (A) water pollution control laws;
- (B) any rules of the water pollution control board; or
- (C) [IC 13-18-10](#).

A determination by the department under this subdivision is appealable under [IC 4-21.5](#).

(Water Pollution Control Board; [327 IAC 19-2-7](#))

**[327 IAC 19-2-8](#) "Constructed wetland" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 4-21.5](#); [IC 13-11-2-40](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10](#); [IC 13-30](#)

Sec. 8. "Constructed wetland" means an approved waste management system designed to maximize the removal of pollutants from process wastewater or other runoff through wetland vegetation uptake, retention, and settling.

(Water Pollution Control Board; [327 IAC 19-2-8](#))

**[327 IAC 19-2-9](#) "Construction" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2-40.8](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10](#); [IC 13-30](#)

Sec. 9. "Construction", as defined in [IC 13-11-2-40.8](#), for purposes of [IC 13-18-10](#), means the fabrication, erection, or installation of a facility or manure control equipment at the location where the facility or manure control equipment is intended to be used. The term does not include the following:

- (1) The dismantling of existing equipment and control devices.
- (2) The ordering of equipment and control devices.
- (3) Off-site fabrication.
- (4) Site preparation.

(Water Pollution Control Board; [327 IAC 19-2-9](#))

**[327 IAC 19-2-10](#) "Contaminated runoff" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 10. "Contaminated runoff" means any precipitation or surface water that has come into contact

with any liquid or solid animal excreta or any used bedding, litter, or waste liquid at the CFO.

(Water Pollution Control Board; [327 IAC 19-2-10](#))

**[327 IAC 19-2-11](#) "Department" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2-51](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 11. "Department", as defined in [IC 13-11-2-51](#), refers to the department of environmental management.

(Water Pollution Control Board; [327 IAC 19-2-11](#))

**[327 IAC 19-2-12](#) "Discharge" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 12. "Discharge", for purposes of this article, means any addition of any pollutant, or combination of pollutants, into any waters of the state from a point source. The term includes, without limitation, an addition of a pollutant into any waters of the state from the following:

(1) Surface runoff that is collected or channeled by human activity.

(2) Discharges through pipes, sewers, or other conveyances, including natural channels, that do not lead to treatment works.

(Water Pollution Control Board; [327 IAC 19-2-12](#))

**[327 IAC 19-2-13](#) "Drainage inlet" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 13. "Drainage inlet" means any surficial opening to an underground tile drainage system that drains to waters of the state. For purposes of this article, the term includes water and sediment control basins.

(Water Pollution Control Board; [327 IAC 19-2-13](#))

**[327 IAC 19-2-14](#) "Feedlot" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 14. "Feedlot" means an outside lot or pen used for confined feeding, including areas that may be covered, partially covered, or uncovered.

(Water Pollution Control Board; [327 IAC 19-2-14](#))

**[327 IAC 19-2-15](#) "Filter strip" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 15. "Filter strip" means a relatively uniform and maintained vegetated area used for collecting



**sediment and cleansing runoff.**

(Water Pollution Control Board; [327 IAC 19-2-15](#))

**[327 IAC 19-2-16](#) "Flood plain" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 16. "Flood plain" means any area adjoining a river, stream, or lake that has been or may be covered by a one hundred (100) year flood.**

(Water Pollution Control Board; [327 IAC 19-2-16](#))

**[327 IAC 19-2-17](#) "Floodway" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 17. "Floodway" means the channel of a river or stream and those portions of the flood plain adjoining the channel that are reasonably required to efficiently carry and discharge the peak flood flow of a one hundred (100) year flood as determined by [310 IAC 6](#).**

(Water Pollution Control Board; [327 IAC 19-2-17](#))

**[327 IAC 19-2-18](#) "Gradient barrier" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 18. "Gradient barrier" means a structure or feature that prevents runoff from entering waters of the state.**

(Water Pollution Control Board; [327 IAC 19-2-18](#))

**[327 IAC 19-2-19](#) "Ground water" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 19. "Ground water" means accumulations of underground water, natural or artificial, public and private, or parts thereof, that are wholly or partially within, flow through, or border upon this state, but excluding man-made underground storage or conveyance structures.**

(Water Pollution Control Board; [327 IAC 19-2-19](#))

**[327 IAC 19-2-20](#) "Highly erodible land" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 20. "Highly erodible land" means land that has a high potential to erode based on site-specific characteristics, such as:**

- (1) slope length and steepness;**
- (2) soil erodibility; and**

(3) rainfall;  
as defined by the USDA-NRCS and Farm Service Agency maps.

(Water Pollution Control Board; [327 IAC 19-2-20](#))

**[327 IAC 19-2-21](#) "Historic site" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#); [IC 14-8-2-125](#)

Sec. 21. "Historic site", as defined in [IC 14-8-2-125](#), means a site that is important to the:

- (1) general;
- (2) archaeological;
- (3) agricultural;
- (4) economic;
- (5) social;
- (6) political;
- (7) architectural;
- (8) industrial; or
- (9) cultural;

history of Indiana. The term includes adjacent property that is necessary for the preservation or restoration of the site.

(Water Pollution Control Board; [327 IAC 19-2-21](#))

**[327 IAC 19-2-22](#) "Incorporation" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 22. "Incorporation" means the mixing of liquid or solid manure with the surface soil using standard agricultural practices, such as tillage.

(Water Pollution Control Board; [327 IAC 19-2-22](#))

**[327 IAC 19-2-23](#) "Injection" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 23. "Injection" means the placement of liquid manure beneath the surface of the soil in the crop root zone using equipment specifically designed for this purpose.

(Water Pollution Control Board; [327 IAC 19-2-23](#))

**[327 IAC 19-2-24](#) "Karst terrain" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 24. "Karst terrain" means an area where karst topography, including the characteristic surface and subterranean features, has developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terrains include the following:

- (1) Sinkholes.
- (2) Sinking streams.
- (3) Caves.

- (4) Large springs.
- (5) Blind valleys.

(Water Pollution Control Board; [327 IAC 19-2-24](#))

#### **[327 IAC 19-2-25](#) "Manure" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 25. "Manure" means the following:

- (1) Liquid or solid animal excreta.
- (2) Waste liquid as defined in section 47 of this rule.
- (3) Any precipitation or surface water that has come into contact with the following:
  - (A) Liquid or solid animal excreta.
  - (B) Used bedding.
  - (C) Litter.
  - (D) Liquid described in subdivision (4).
- (4) Any other materials generated at a livestock or poultry production area commingled with the materials listed in subdivisions (1) through (3).

(Water Pollution Control Board; [327 IAC 19-2-25](#))

#### **[327 IAC 19-2-26](#) "Manure application" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 26. "Manure application" means the placement of liquid or solid manure by:

- (1) spraying or spreading onto the land surface;
- (2) injection below the land surface; or
- (3) incorporation into the soil.

(Water Pollution Control Board; [327 IAC 19-2-26](#))

#### **[327 IAC 19-2-27](#) "Manure storage facility" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 27. "Manure storage facility" means any:

- (1) pad;
- (2) pit;
- (3) pond;
- (4) lagoon;
- (5) tank;
- (6) building; or
- (7) manure containment area;

used to store or treat manure, including any portions of buildings used specifically for manure storage or treatment.

(Water Pollution Control Board; [327 IAC 19-2-27](#))

#### **[327 IAC 19-2-28](#) "Manure transfer system" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 28. "Manure transfer system" means any:**

- (1) pipes;
- (2) lift stations;
- (3) pumps;
- (4) channels; or
- (5) other stationary devices;

used for the transfer of manure.

(Water Pollution Control Board; [327 IAC 19-2-28](#))

**[327 IAC 19-2-29](#) "Manure transfer vehicle" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 29. "Manure transfer vehicle" means a vehicle, tank, or wagon used to move manure.**

(Water Pollution Control Board; [327 IAC 19-2-29](#))

**[327 IAC 19-2-30](#) "Operating record" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 30. "Operating record" means the written record of the CFO activities required by this article and kept by the owner/operator.**

(Water Pollution Control Board; [327 IAC 19-2-30](#))

**[327 IAC 19-2-31](#) "Owner/operator" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 31. (a) "Owner/operator", for purposes of this article, means the person:**

- (1) that owns the waste management systems at the CFO;
- (2) that:
  - (A) owns the livestock at the CFO; and
  - (B) applies for or has received an approval under this article; or
- (3) in direct or responsible charge or control of one (1) or more CFOs or land application activity.

**(b) The term includes contractors responsible for activities described in [327 IAC 19-1-2\(b\)](#) at the CFO.**

(Water Pollution Control Board; [327 IAC 19-2-31](#))

**[327 IAC 19-2-32](#) "Process wastewater" defined**

Authority: [IC 13-14-8](#); [IC 13-14-9](#); [IC 13-15-1-2](#); [IC 13-15-2-1](#); [IC 13-18-3](#)

Affected: [IC 13-11-2](#); [IC 13-18-4](#)

**Sec. 32. "Process wastewater" means the following:**

- (1) Water directly or indirectly used in the operation of the AFO for any or all of the following:
  - (A) Spillage or overflow from animal or poultry watering systems.
  - (B) Washing, cleaning, or flushing any of the following:
    - (i) Pens.



- (ii) Barns.
- (iii) Manure pits.
- (iv) Other AFO facilities.
- (C) Direct contact swimming, washing, or spray cooling of animals.
- (D) Dust control.

(2) Process wastewater includes any water that comes into contact with or is a constituent of any raw materials, products, or byproducts including the following:

- (A) Manure.
- (B) Litter.
- (C) Feed.
- (D) Milk.
- (E) Eggs.
- (F) Bedding.

(Water Pollution Control Board; [327 IAC 19-2-32](#))

#### **[327 IAC 19-2-33](#) "Production area" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 33. "Production area" means that part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas. The animal confinement area includes, but is not limited to, open lots, housed lots, feedlots, confinement houses, stall barns, free stall barns, milkrooms, milking centers, cowyards, barnyards, medication pens, walkers, animal walkways, and stables. The manure storage area includes, but is not limited to, lagoons, runoff ponds, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes, but is not limited to, feed silos, silage bunkers, and bedding materials. The waste containment area includes, but is not limited to, settling basins, and areas within berms and diversions that separate uncontaminated storm water. The term includes any egg washing or egg processing facility, and any area used in the storage, handling, treatment, or disposal of mortalities.

(Water Pollution Control Board; [327 IAC 19-2-33](#))

#### **[327 IAC 19-2-34](#) "Public water supply surface intake structure" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 34. "Public water supply surface intake structure" means any structure used for the purpose of withdrawing surface water for use in a public water supply system.

(Water Pollution Control Board; [327 IAC 19-2-34](#))

#### **[327 IAC 19-2-35](#) "Public water supply well" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 35. "Public water supply well" means any well that provides water to the public through a water distribution system that:

- (1) serves at least twenty-five (25) persons per day for:
  - (A) drinking;
  - (B) domestic use; or
  - (C) other purposes; or
- (2) has at least fifteen (15) service connections.

(Water Pollution Control Board; [327 IAC 19-2-35](#))

**[327 IAC 19-2-36](#) "Registered professional engineer" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#); [IC 25-31](#)

Sec. 36. "Registered professional engineer" means a professional engineer registered by the state under [IC 25-31](#).

(Water Pollution Control Board; [327 IAC 19-2-36](#))

**[327 IAC 19-2-37](#) "Saturated ground" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#); [IC 25-31](#)

Sec. 37. "Saturated ground" means ground so soaked with moisture that it cannot absorb any more liquid.

(Water Pollution Control Board; [327 IAC 19-2-37](#))

**[327 IAC 19-2-38](#) "Sensitive area" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#); [IC 14-31](#); [IC 14-38-1-5](#)

Sec. 38. "Sensitive area" means a site where conditions exist that pose a specific water quality threat to one (1) or more of the following:

- (1) Aquifers used as a source of drinking water.
- (2) Public water supply wells.
- (3) Wellhead protection areas.
- (4) Drinking water supply reservoirs.
- (5) Areas requiring special protection, such as:
  - (A) wetlands, except for wetlands constructed for manure management;
  - (B) karst terrains;
  - (C) the critical habitat of an endangered species; or
  - (D) natural areas, including:
    - (i) parks;
    - (ii) nature preserves, as regulated under [IC 14-31](#);
    - (iii) historic sites, as defined in section 21 of this rule; and
    - (iv) public lands, as defined in [IC 14-38-1-5](#).

(Water Pollution Control Board; [327 IAC 19-2-38](#))

**[327 IAC 19-2-39](#) "Site preparation" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 39. "Site preparation" means any of the following:

- (1) Demolition or wrecking of buildings or other structures.
- (2) Clearing of building sites.
- (3) Sale of materials from demolished structures.
- (4) Blasting.

- (5) Test drilling.
- (6) Earthmoving.
- (7) Excavating.
- (8) Land drainage.
- (9) Placement of access lanes or driveways.
- (10) Installation of utilities.
- (11) Staking or flagging.

(Water Pollution Control Board; [327 IAC 19-2-39](#))

**[327 IAC 19-2-40](#) "Spill" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 40. "Spill" has the meaning set forth in [327 IAC 2-6.1-4\(15\)](#).**

(Water Pollution Control Board; [327 IAC 19-2-40](#))

**[327 IAC 19-2-41](#) "Spray irrigation" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 41. "Spray irrigation" means the application of manure on the land through a stationary or mobile sprinkler type system.**

(Water Pollution Control Board; [327 IAC 19-2-41](#))

**[327 IAC 19-2-42](#) "Staging" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 42. "Staging" means the temporary placement of manure at the site where the manure will be land applied.**

(Water Pollution Control Board; [327 IAC 19-2-42](#))

**[327 IAC 19-2-43](#) "Surface application" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 43. "Surface application" means the placement of manure by spraying or spreading onto the land surface.**

(Water Pollution Control Board; [327 IAC 19-2-43](#))

**[327 IAC 19-2-44](#) "Surface water" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 44. "Surface water" means water present on the surface of the earth, including:**

- (1) streams;
- (2) lakes;
- (3) ponds;
- (4) rivers;
- (5) swamps;
- (6) marshes; or
- (7) wetlands.

(Water Pollution Control Board; [327 IAC 19-2-44](#))

**[327 IAC 19-2-45](#) "Uncovered" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 45. "Uncovered" means any structure that allows exposure of manure to precipitation events or to the run-on or runoff from precipitation events.**

(Water Pollution Control Board; [327 IAC 19-2-45](#))

**[327 IAC 19-2-46](#) "Vegetative management system" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 46. "Vegetative management system" means a vegetated area designed to accept contaminated runoff or waste liquid after settling for the purpose of treatment or infiltration into the soil.**

(Water Pollution Control Board; [327 IAC 19-2-46](#))

**[327 IAC 19-2-47](#) "Waste liquid" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 47. "Waste liquid" means liquid to be handled as manure that is generated at the CFO, including:**

- (1) excess drinking water;
- (2) cleanup water;
- (3) contaminated livestock truck or trailer washwater;
- (4) milking parlor wastewater;
- (5) milk house washwater;
- (6) egg washwater; or
- (7) silage leachate.

(Water Pollution Control Board; [327 IAC 19-2-47](#))

**[327 IAC 19-2-48](#) "Waste management system" defined**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 48. "Waste management system" means any approved method of managing manure or process wastewater at the CFO, including:**

- (1) manure storage facilities;
- (2) manure transfer systems;
- (3) manure treatment systems, such as a:



- (A) constructed wetland;
- (B) vegetative management system;
- (C) wastewater treatment system under a valid national pollutant discharge elimination system (NPDES) permit;
- (4) feedlots;
- (5) confinement buildings; or
- (6) waste liquid handling, storage, and treatment systems.

(Water Pollution Control Board; [327 IAC 19-2-48](#))

#### [327 IAC 19-2-49](#) "Waters" defined

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2-265](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 49. (a) "Waters", as defined in [IC 13-11-2-265](#), means:

- (1) the accumulations of water, surface and underground, natural and artificial, public and private; or
- (2) a part of the accumulations of water;

that are wholly or partially within, flow through, or border upon Indiana.

(b) The term does not include:

- (1) an exempt isolated wetland;
- (2) a private pond; or
- (3) an off-stream pond, reservoir, wetland, or other facility built for reduction or control of pollution or cooling of water before discharge.

(c) The term includes all waters of the United States, as defined in Section 502(7) of the federal Clean Water Act (33 U.S.C. 1362(7)), that are located in Indiana.

(Water Pollution Control Board; [327 IAC 19-2-49](#))

### Rule 3. Performance Standards

#### [327 IAC 19-3-1](#) Performance standards

Authority: [IC 13-14-8-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-18](#); [IC 13-22](#)

Sec. 1. (a) A CFO shall be managed so as to avoid an unpermitted discharge into waters of the state.

(b) A CFO must be constructed and operated in a manner that minimizes nonpoint source pollution entering waters of the state.

(c) A CFO shall take all reasonable steps to prevent manure releases, spills or the discharge of manure in violation of the approval or this article, including seepage and leakage.

(d) All waste management systems must be designed, constructed, and maintained to minimize leaks and seepage and prevent manure releases or spills, as well as ensure compliance with the water quality standards in [327 IAC 2](#).

(e) Manure that is generated or stored at a CFO and that is to be staged or applied at the CFO must be staged or applied in such a manner as:

- (1) not to enter or threaten to enter waters of the state;
- (2) to prevent:
  - (A) runoff;

- (B) ponding for more than twenty-four (24) hours;
  - (C) manure releases; and
  - (D) spills; and
- (3) to minimize nutrient leaching beyond the root zone.

(Water Pollution Control Board; [327 IAC 19-3-1](#))

#### Rule 4. General Approval Conditions

##### [327 IAC 19-4-1](#) Approval conditions

Authority: [IC 13-14-8-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-18](#); [IC 13-22](#)

##### Sec. 1. (a) CFOs must:

- (1) have a valid approval to operate; or
- (2) close in accordance with [327 IAC 19-16](#).

##### (b) The following conditions apply to all confined feeding approvals:

- (1) The owner/operator must comply with all terms and conditions of the approval and this article.
- (2) The owner/operator shall take all reasonable steps to prevent, minimize, or correct any adverse impact on the environment resulting from noncompliance with the approval or this article.
- (3) The filing by the owner/operator of a request for an approval amendment, revocation and reissuance, or revocation does not stay or suspend any approval term or condition. The approval may be amended, revoked and reissued, or revoked for causing or threatening to cause harm to the environment.
- (4) The approval does not convey any property rights of any sort or any exclusive privilege.
- (5) The owner/operator shall allow the commissioner, or an authorized representative (including an authorized contractor acting as a representative of the commissioner), upon the presentation of credentials and in compliance with biosecurity procedures developed by the department in consultation with the Indiana state board of animal health or individual owners/operators as defined in [327 IAC 19-2-31](#) to:
  - (A) enter upon the CFO premises or where any records must be kept under the terms and conditions of the approval or this article;
  - (B) have access for review to any records that must be kept under the terms and conditions of the approval;
  - (C) inspect, at reasonable times:
    - (i) any monitoring equipment or method;
    - (ii) any waste management systems; or
    - (iii) practices required or otherwise regulated under the approval; and
  - (D) sample or monitor, at reasonable times, for the purpose of evaluating compliance with the approval or state and federal laws and regulations.
- (6) The provisions of this approval are severable and, if any provision of the approval or the application of any provision of the approval to any circumstances is held invalid, the application of such provision to other circumstances and the remainder of this approval shall not be affected thereby.

(c) If determined to be necessary to protect human health or the environment, the commissioner may require additional design standards, operational requirements, or other best management practices, such as:

- (1) monitoring systems;
- (2) liners;
- (3) higher compaction;
- (4) reporting;
- (5) certification by a registered professional engineer;
- (6) innovative technology; or
- (7) other protective measures.

The commissioner shall provide written documentation describing the basis for this determination.

(Water Pollution Control Board; [327 IAC 19-4-1](#))

## Rule 5. Alternate Design or Compliance Approach; Innovative Technology

### [327 IAC 19-5-1](#) Alternate design or compliance approach; innovative technology

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 1. (a) The use of a design or compliance approach other than the requirement specified in this article, or an innovative technology may be proposed by the owner/operator in accordance with the following:

- (1) The proposal for the alternative design or compliance approach, or innovative technology must be accompanied by documentation that indicates that the performance standards in [327 IAC 19-3-1](#) will be met. The alternative design or compliance approach, or innovative technology must comply with all existing environmental rules and laws.
- (2) The proposed design or compliance approach, or innovative technology must be incorporated into the approval.

(b) In making a determination on an alternate design or compliance approach, or innovative technology, the commissioner shall consider applicable criteria that may include the following:

- (1) Design specifications that indicate adequate structural integrity.
- (2) Protective measures that reduce the potential for manure releases and spills.
- (3) The existence of barriers or surface gradient that directs liquid flow away from features specified for protection.
- (4) Operational practices that provide additional protection.
- (5) Threats of adverse impacts to water quality or other specified sensitive areas.
- (6) Other criteria related to protection of the environment or human health.

(c) The commissioner shall provide written documentation describing the basis for the approval or denial of the proposed alternate design, compliance approach, or innovative technology.

(Water Pollution Control Board; [327 IAC 19-5-1](#))

## Rule 6. Existing Confined Feeding Operations

### [327 IAC 19-6-1](#) Existing confined feeding operations

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10-1](#); [IC 13-18-10-2.3](#); [IC 13-30](#)

Sec. 1. (a) All CFOs must be maintained and operated in compliance with all applicable:

- (1) state laws; and
- (2) approval conditions.

(b) The owner/operator of a CFO with an existing approval before the effective date of this article shall comply with the following requirements by the effective date of this article:

- (1) Operational requirements in [327 IAC 19-13](#), except the owner/operator shall comply with [327 IAC 19-13-4](#) within ninety (90) days of the effective date of this article.
- (2) Manure application requirements in [327 IAC 19-14](#).
- (3) Manure management plan requirements in [IC 13-18-10-2.3](#), and as described in [327 IAC 19-7-5](#).
- (4) Closure requirements in [327 IAC 19-16](#).

(c) An approval amendment is required for an increase in the amount of manure generated that

reduces the storage capacity to less than the required storage capacity at the time of the most recent approval.

(d) Any increase in animal capacity or manure containment capacity requires a new application under [IC 13-18-10-1](#) and the requirements therein.

(e) A facility that becomes a regulated CFO after the effective date of this article that contains existing waste management systems not previously regulated under this title may be required to modify them to meet the requirements of this article if necessary to protect human health and the environment. The commissioner shall provide written documentation describing the basis for any modifications.

(Water Pollution Control Board; [327 IAC 19-6-1](#))

## Rule 7. Application Requirements

### [327 IAC 19-7-1](#) Application requirements

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15-8](#); [IC 13-18-10-2](#); [IC 13-18-10-2.1](#); [IC 13-30](#); [IC 25-17.6](#)

Sec. 1. (a) An application under this rule is required for all CFOs not previously regulated under:

- (1) this article;
- (2) [327 IAC 16](#) before its repeal; or
- (3) [327 IAC 5](#) or [327 IAC 15](#) before their repeal.

(b) Three (3) copies of the application package, one (1) of which may be electronic, for an approval of a CFO must be submitted to the commissioner in a format specified by the department.

(c) A complete application package must include all of the following information:

- (1) A completed application on forms provided by the department.
- (2) A plot map as described in section 2 of this rule.
- (3) A farmstead plan as described in section 3 of this rule.
- (4) A waste management system drawing as described in section 4 of this rule.
- (5) A manure management plan as described in section 5 of this rule.
- (6) Soil and water table information from test holes for proposed manure storage facilities that are conducted by a soil scientist registered under the Indiana board of registration of soil sciences, a professional geologist certified in Indiana under [IC 25-17.6](#), or a professional engineer registered in Indiana. The number of test holes must be sufficient to adequately characterize the seasonal water table and soil. Test holes for concrete manure storage facilities must be at least two (2) feet below the base of the structure. If the manure storage facility is earthen, test holes must be:
  - (A) placed at a rate of two (2) holes for the first acre of storage and one (1) additional hole for each additional half acre of storage;
  - (B) evenly distributed throughout the storage structure;
  - (C) at least five (5) feet below the base of the structure for non-karst areas; or
  - (D) in accordance with [327 IAC 19-12-2\(b\)\(3\)](#) in areas of karst terrain.
- (7) A description of any proposed alternative to a specific requirement in this article to demonstrate equivalent environmental and human health protection in accordance with [327 IAC 19-5](#).
- (8) A list of potentially affected parties, including those listed in [IC 13-18-10-2](#) and [IC 13-15-8](#).
- (9) A fee of one hundred dollars (\$100), in accordance with [IC 13-18-10-2\(a\)\(5\)](#).
- (10) Other plans or supplemental information that may be required by the commissioner to ensure compliance with this article. The commissioner shall provide written documentation of the basis for requiring any other plans or supplemental information.
- (11) A statement affirming that AFOs adjacent to or contiguous with the CFO are not under common ownership or control of the applicant.
- (12) Copies of any written waivers related to reduction of setback distances.



(d) Existing CFOs that are expanding must also provide a certification on a form provided by the department that enough acreage exists for land application. This certification must be submitted in writing to the department.

(e) The commissioner may deny an approval application, or place conditions on an approval:

- (1) if the CFO is, at the time of the approval application or approval decision, not in compliance with water pollution control laws, [IC 13-18](#), or rules promulgated thereunder;
- (2) consistent with [IC 13-18-10-2.1](#);
- (3) if the application is not on a form provided by the department or does not meet the requirements of this article.

(Water Pollution Control Board; [327 IAC 19-7-1](#))

### **[327 IAC 19-7-2](#) Plot maps**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 2. (a) The applicant shall submit plot maps of the location proposed for approval consisting of the following:

- (1) A United States Department of Agriculture Natural Resources Conservation Service soil survey map.
- (2) A United States Geological Survey topographical map that includes identification of any public water supply wells and public water supply surface intake structures within one thousand (1,000) feet of the manure storage facilities.

(b) The maps in subsection (a) must be legible and clearly show the following:

- (1) The location of the waste management systems.
- (2) The boundaries of the property of the CFO.
- (3) The boundaries of livestock and poultry production areas.
- (4) The boundaries and owners of all manure application areas.
- (5) Available acreage for manure application after calculation of setbacks.

These maps will satisfy the requirement for maps under section 5(a)(3) of this rule.

(Water Pollution Control Board; [327 IAC 19-7-2](#))

### **[327 IAC 19-7-3](#) Farmstead plan**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 3. (a) A farmstead plan must show all existing and proposed structures, including the approval dates for all existing structures and, within five hundred (500) feet of the waste management systems, the following known features:

- (1) Surface waters of the state.
- (2) Public and private roads.
- (3) Water well locations.
- (4) Characteristics of karst terrain.
- (5) Production area surface drainage patterns.
- (6) Property boundary line.
- (7) All outfalls of known subsurface drainage structures, including perimeter drain outfalls.
- (8) Drainage inlets, including water and sediment control basins.
- (9) Mortality management sites.

(b) In addition to the information required in subsection (a), the farmstead plan must show the diversion of uncontaminated surface water.

(c) The farmstead plan must also show the type and number of animals per structure.

(d) The farmstead plan must be legible and either:

(1) drawn to approximate scale; or

(2) show specific distances between the:

(A) waste management systems; and

(B) features in subsection (a) that are within five hundred (500) feet of the existing or proposed waste management system.

(e) The farmstead plan must contain reference to public roads.

(f) The farmstead plan must indicate any part of the CFO that is in a one hundred (100) year flood plain.

(g) The plan must be submitted on paper not less than eight and one-half (8 1/2) inches by eleven (11) inches in size and not more than twenty-four (24) inches by thirty-six (36) inches in size.

(Water Pollution Control Board; [327 IAC 19-7-3](#))

#### **[327 IAC 19-7-4](#) Waste management system drawing**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 4. The waste management system drawing must show detailed views and necessary cross sections to define all dimensions and construction materials. Systems relying on gravity flow must provide elevations of the entire waste management system that relies on gravity.

(Water Pollution Control Board; [327 IAC 19-7-4](#))

#### **[327 IAC 19-7-5](#) Manure management plan**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 5. (a) A manure management plan must be developed and submitted to the commissioner that contains the following:

(1) Procedures for soil testing as described in subsection (c).

(2) Procedures for manure testing as described in subsection (d).

(3) Plot maps as described in section 2(a)(1) and 2(b) of this rule.

(4) If applicable, the land application acreage requirements waiver, as described in [327 IAC 19-14-2\(d\)](#).

(b) If applicable, the manure management plan must also contain a description of any:

(1) alternate methods proposed by the applicant for managing of the manure; and

(2) other practices to be used that assure the CFO meets the performance standards in this article.

(c) A soil test must be obtained that provides sufficient information about soil fertility to allow for nutrient recommendations, including nitrogen, phosphorus, potassium, and lime recommendations, for existing or planned crops. Soil tests may not represent more than twenty (20) acres per sample. The frequency of this testing must be:

(1) specified in the manure management plan; and

(2) conducted a minimum of once every four (4) years unless a different frequency is approved by the department in writing and is included in the manure management plan.

(d) A manure test must be obtained that provides sufficient information about the manure content to allow for nutrient recommendations for existing or planned crops and to minimize nutrient leaching. The

frequency of this testing must be:

- (1) specified in the manure management plan; and
- (2) conducted a minimum of once every year.

(e) Manure samples must be representative of the manure that is land applied. If manure is mixed from separate manure storage facilities prior to land application, a composite sample may be taken. If manure is land applied from separate and distinct storage, a sample must be taken from each.

(f) A manure management plan must be submitted to the department at least one (1) time every five (5) years and with any approval application and renewal application to maintain a valid approval for the CFO. A copy of the current manure management plan must be maintained in the operating record.

(Water Pollution Control Board; [327 IAC 19-7-5](#))

#### **[327 IAC 19-7-6](#) Mortality management**

Authority: [IC 13-13-5-1](#); [IC 13-15-1-2](#); [IC 13-15-2-1](#)

Affected: [IC 13-18-10](#)

Sec. 6. (a) CFOs must carry out proper management of dead livestock as required by [345 IAC 7-7](#) to ensure that there shall be:

- (1) no discharge of mortality or liquids that have been in contact with mortality to waters of the state; and
- (2) no disposal in a manure storage facility that is not specifically designed to treat animal mortalities.

(b) Mortality composting sites must meet all of the following criteria:

- (1) Be constructed and operated to prevent the following:
  - (A) Leachate, either through the use of earthen compaction or a concrete pad.
  - (B) Rodents, domestic, and wild animals from accessing the compost pile.
  - (C) Run-on and runoff of storm water.
- (2) Comply with setbacks listed in [327 IAC 19-12-3](#).

(Water Pollution Control Board; [327 IAC 19-7-6](#))

### **Rule 8. Approval Process**

#### **[327 IAC 19-8-1](#) Duration of approvals**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 1. An approval shall be effective for a fixed term. That term begins when the approval is issued and is not to exceed five (5) years. An approval may be amended, revoked and reissued, or revoked prior to the expiration of the term for cause, as specified in sections 3 and 5 of this rule, or in accordance with conditions set forth in the approval. In no event may the term of an approval be extended beyond five (5) years from its original effective date by amendment, extension, or other means, except as provided in section 2(a) of this rule.

(Water Pollution Control Board; [327 IAC 19-8-1](#))

#### **[327 IAC 19-8-2](#) Approval renewals**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 4-21.5](#); [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10-2.3](#); [IC 13-30-3](#)

**Sec. 2. (a)** If the owner/operator wishes to continue the activity regulated by the approval after the expiration date of the approval, the owner/operator shall apply for and obtain an approval renewal. The terms and conditions of an expired approval are automatically extended in full force and effect until the effective date of a renewal, if the:

- (1) owner/operator has submitted a timely and complete application for an approval renewal under this article at least thirty (30) days prior to the expiration of the approval; and
- (2) commissioner, through no fault of the owner/operator, does not issue an approval renewal prior to the expiration date of the previous approval.

(b) In accordance with [IC 13-18-10-2.3](#), an updated manure management plan must be submitted once every five (5) years, along with the additional information required in subsection (c), at least thirty (30) days prior to the expiration of the approval. Approval renewals shall be issued for a fixed term beginning with the submittal date and are not to exceed five (5) years.

(c) The application for approval renewal must be on a form provided by the department and contain the following:

- (1) An updated manure management plan in accordance with [327 IAC 19-7-5](#).
- (2) A current farmstead plan, as described in [327 IAC 19-7-3](#).
- (3) A minimum number of acres for manure application, as described in [327 IAC 19-14-2\(a\)](#).

(Water Pollution Control Board; [327 IAC 19-8-2](#))

### [327 IAC 19-8-3](#) Amendments and notifications

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15-7-1](#); [IC 13-18-10-2.1](#); [IC 13-30](#)

**Sec. 3. (a)** The department may issue amendments to approvals of a CFO at any time:

- (1) under [IC 13-18-10-2.1\(i\)](#);
- (2) at the request of the applicant to address changes at the CFO that do not require a new approval;  
or
- (3) due to an increase in the amount of manure generated that reduces the storage capacity to less than the required storage capacity at the time of the most recent approval.

(b) The owner/operator must submit written notification to the department of any changes to the operation as approved. The department will review the changes and decide if amendments are necessary. At any time the department may decide an amendment is necessary, and the owner/operator must comply with the amended approval.

(Water Pollution Control Board; [327 IAC 19-8-3](#))

### [327 IAC 19-8-4](#) Denials

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10](#); [IC 13-30](#)

**Sec. 4. (a)** Denial of an application shall result from failure to:

- (1) be in compliance with all current approval conditions during departmental review; or
- (2) submit a complete application after receipt of two (2) notices of the same deficiency on the new or renewal application.

(b) All CFOs are subject to [327 IAC 19-7-1\(e\)](#), as well as the conditions listed in this section.

(Water Pollution Control Board; [327 IAC 19-8-4](#))

### [327 IAC 19-8-5](#) Revocation



Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10](#); [IC 13-30-3-11](#)

Sec. 5. (a) The commissioner may revoke an approval or a condition of an approval as a result of a violation of:

- (1) water pollution control laws;
- (2) rules adopted under the water pollution control laws;
- (3) [IC 13-18-10](#);
- (4) this article; or
- (5) approval conditions.

(b) The commissioner may revoke an approval or condition or modify the terms of an approval through an order of the commissioner under [IC 13-30-3-11](#).

(c) The commissioner shall provide written documentation of the basis for revoking an approval or a condition of an approval.

(d) Revocation of approval may happen at any time a violation is discovered, regardless of when the violation actually occurred.

(Water Pollution Control Board; [327 IAC 19-8-5](#))

#### [327 IAC 19-8-6](#) Transferability

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 6. (a) When ownership of a CFO is transferred, the parties completing the transaction shall request transfer of the approval from the department. This request must include a written agreement that is submitted to the commissioner within ninety (90) days of the transfer and must contain the following:

- (1) A specific date for transfer of approval responsibilities.
- (2) Identification of responsibility for any violations existing at the time of the transfer.

(b) Failure to comply with subsection (a) shall result in the following:

- (1) Revocation of the existing CFO approval and possible penalties for operating without a valid approval.
- (2) The necessity of the new owner/operator to submit an application for a new approval under [327 IAC 19-7-1](#).

(Water Pollution Control Board; [327 IAC 19-8-6](#))

#### [327 IAC 19-8-7](#) Public comment periods and notifications

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10-1](#); [IC 13-30](#)

Sec. 7. (a) An applicant who applies for approval under [IC 13-18-10-1](#) to construct or expand a CFO on land for which a valid existing approval has not been issued shall make a reasonable effort to provide notice not more than ten (10) working days after submitting an application:

- (1) to the county executive of the county in which the CFO is to be located or expanded; and
- (2) to each owner and each occupant of land of which any part of the boundary is one-half (1/2) mile or less from the following:
  - (A) Any part of the proposed footprint of either or both of the following to be located on the land on which the CFO is to be located:
    - (i) A livestock or poultry production structure.
    - (ii) A permanent manure storage facility.

(B) Any part of the proposed footprint of either or both of the following to be located on the land on which the CFO is to be expanded:

- (i) A livestock or poultry production structure.
- (ii) The expanded area of a livestock or poultry production structure.

The notice must be completed on forms provided by the commissioner, sent by mail, be in writing, include the date on which the application was submitted to the department, and include a brief description of the subject of the application. The notice must also include the dates comments will be accepted by the department in subsection (b). The applicant shall pay the cost of complying with this subsection. The applicant shall submit an affidavit to the department that certifies that the applicant has complied with this subsection, as well as submit a copy of the state form to the department that was sent to persons in this subsection.

(b) The department shall accept written comments for a thirty-three (33) day period following the date of mailing of the notice required under subsection (a).

(c) A public meeting on an approval application may be held at the commissioner's discretion in appropriate cases where environmental concerns relevant to applicable rules or laws are raised.

(*Water Pollution Control Board; [327 IAC 19-8-7](#)*)

## Rule 9. Operating Record

### [327 IAC 19-9-1](#) Requirements

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10](#); [IC 13-30](#)

Sec. 1. (a) All valid approvals, amendments, renewals, and notifications relevant to the approvals must be:

- (1) added to the operating record in accordance with required time frames established in this article and [IC 13-18-10](#); and
- (2) maintained and updated in the operating record.

(b) The operating record must also contain all records from the following, if applicable:

- (1) [327 IAC 19-7-1](#)(c) and [327 IAC 19-7-1](#)(d), all requirements within the current version of the complete application.
- (2) [327 IAC 19-7-3](#), the farmstead plan.
- (3) [327 IAC 19-7-5](#), the manure management plan.
- (4) [327 IAC 19-10](#), a ground water monitoring plan.
- (5) [327 IAC 19-11-2](#)(c), the storm water management certification.
- (6) [327 IAC 19-12-4](#)(d), certification by a registered professional engineer.
- (7) [327 IAC 19-12-4](#)(r) and [327 IAC 19-12-4](#)(s), regarding construction requirements.
- (8) [327 IAC 19-13-1](#)(d), regarding completed self-monitoring records for five (5) years.
- (9) [327 IAC 19-13-4](#), the current emergency response plan, and documentation of any spill response implemented by CFO personnel within the past five (5) years.
- (10) [327 IAC 19-14-2](#)(a), regarding minimum acreage records.
- (11) [327 IAC 19-14-3](#)(b), justification of nitrogen losses.
- (12) [327 IAC 19-14-3](#)(f), regarding land application records for five (5) years.
- (13) [327 IAC 19-14-4](#)(h), regarding emergency land application of manure.
- (14) [327 IAC 19-14-5](#), a spray irrigation plan.
- (15) [327 IAC 19-14-6](#)(d), regarding land application monitoring activities.
- (16) [327 IAC 19-14-7](#)(c), regarding marketing and distribution records for five (5) years.
- (17) A land use agreement, which must include the following:
  - (A) The location of fields.
  - (B) Available acreage after calculation for setbacks.
  - (C) The signature of the owner of the property on which manure will be applied.
- (18) Documentation of maintenance activities on manure storage facilities.
- (19) Copies of any written waivers related to reduction of the set back distances.

**(20) All required permits issued by the department.**

*(Water Pollution Control Board; [327 IAC 19-9-1](#))*

## **Rule 10. Ground Water Monitoring**

### **[327 IAC 19-10-1](#) Ground water monitoring**

**Authority:** [IC 13-13-5-1](#); [IC 13-15-1-2](#); [IC 13-15-2-1](#)

**Affected:** [IC 13-18-10](#)

**Sec. 1. (a) Ground water monitoring may be required on a case by case basis based on:**

- (1) proximity of ground water aquifer to waste management systems; or**
- (2) soil types.**

**All CFOs required to conduct ground water monitoring must comply with the requirements of this section.**

**(b) Owners/operators of a manure storage facility shall develop and follow a written ground water monitoring plan. This plan must:**

- (1) be approved by the department;**
- (2) be kept in the operating record; and**
- (3) include:**

**(A) monitoring parameters, including:**

- (i) field pH;**
- (ii) field specific conductance;**
- (iii) total Kjeldahl nitrogen;**
- (iv) chloride;**
- (v) fecal coliform bacteria;**
- (vi) phosphate;**
- (vii) sulfate; and**
- (viii) total organic carbon;**

**(B) monitoring frequency;**

**(C) sample collection method and identification;**

**(D) sample preservation and shipment, including field quality control;**

**(E) analytical procedures, including:**

- (i) method detection limits; and**
- (ii) practical quantitation limits;**

**(F) chain of custody control; and**

**(G) a description of how the owner/operator shall determine whether there is a statistically significant increase over background values for each parameter monitored, with the exception of field pH and field specific conductance. The owner/operator shall make these statistical determinations each time the owner/operator collects samples.**

**(c) If the owner/operator determines under subsection (b)(3)(G) that there is a statistically significant increase for parameters at any monitoring device, the owner/operator shall notify the commissioner of this finding in writing within fourteen (14) days. The notification must indicate what parameters have shown statistically significant increases over background levels. The department may then require corrective action.**

**(d) Owners/operators must submit the results of ground water monitoring to the department within sixty (60) days of sampling.**

**(e) Required monitoring must be conducted throughout the active life of the storage facility. Ground water monitoring may be extended beyond the active life of the manure storage facility if a corrective action program is being conducted at the facility.**

*(Water Pollution Control Board; [327 IAC 19-10-1](#))*

## Rule 11. Storm Water Management

### [327 IAC 19-11-1](#) Applicability

Authority: [IC 13-13-5-1](#); [IC 13-15-1-2](#); [IC 13-15-2-1](#)

Affected: [IC 13-18-10](#)

Sec. 1. (a) All CFOs that are defined as concentrated animal feeding operations (CAFOs) in 40 CFR 122.23(b)(2) and all CAFOs with a NPDES permit must meet the storm water pollution prevention plan requirements in 40 CFR 122.23(e).

(b) All CFOs not defined as a CAFO in subsection (a) must comply with section 2 of this rule.

(Water Pollution Control Board; [327 IAC 19-11-1](#))

### [327 IAC 19-11-2](#) Storm water management

Authority: [IC 13-13-5-1](#); [IC 13-15-1-2](#); [IC 13-15-2-1](#)

Affected: [IC 13-18-10](#)

Sec. 2. (a) Storm water management must consider the following:

(1) All activities and significant materials that may reasonably be expected to add significant amounts of pollutants to storm water draining from the facility.

(2) The potential pollutant sources from the following activities:

(A) Immediate access roads and rail lines used or traveled by carriers of raw materials, waste material, or byproducts used or created by the facility.

(B) Refuse sites.

(C) Sites used for the storage and maintenance of material handling equipment.

(D) Shipping and receiving areas.

The description should specifically list any significant potential source of pollutants at the site.

(3) Types of materials handled at the site that potentially may be exposed to precipitation, including the following:

(A) Materials that are treated, stored, or disposed of in a manner to allow exposure to storm water where that exposure may release contaminants into the storm water.

(B) The method and location of on-site storage or disposal of significant materials.

(C) Paved, dirt, or gravel parking areas for storage of vehicles to be maintained.

(D) Materials management practices employed to minimize contact of materials with storm water runoff.

(E) The location and description of existing structural and nonstructural control measures to reduce pollutants in storm water runoff.

(F) A description of any treatment the storm water receives, including the ultimate disposal of any solid or liquid wastes.

(b) The following storm water management practices must be implemented:

(1) Good housekeeping. All areas that may contribute pollutants to storm water discharges should be maintained in a clean, orderly manner.

(2) Preventative maintenance. A preventative maintenance program including timely inspection and maintenance schedule of storm water management devices.

(3) Inspections. Self-monitoring inspections conducted as permit conditions require including records of inspection of storm water control devices and measures implemented. Records of inspection shall be maintained in the farm operating record.

(4) Sediment and erosion control. Identify areas that, due to topography, activities, or other factors, have a high potential for significant soil erosion and identify structural, vegetative, and/or stabilization measures to be used to limit erosion.

(5) Management of storm water runoff. Practices (other than those that control the generation or source or sources of pollutants) used to divert, infiltrate, reuse, or otherwise manage storm water



runoff so as to reduce pollutants in storm water discharges from the site.

(c) The owner/operator of the CFO must complete a certification on a form provided by the department that the requirements of this section have been met. This certification must be kept in the operating record.

(d) If the implemented storm water pollution prevention practices are deemed ineffective by the department, the commissioner may require additional measures to be taken. The commissioner shall provide written documentation describing the basis for any required changes.

(Water Pollution Control Board; [327 IAC 19-11-2](#))

## **Rule 12. Manure Handling and Storage; Site, Design, and Construction Requirements for Waste Management Systems**

### **[327 IAC 19-12-1](#) Applicability and availability of standards**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 1. (a) This rule applies to waste management systems approved for construction after the effective date of this article.

(b) Indiana NRCS conservation practice standards and construction specifications are available from the Natural Resources Conservation Service, Indiana Field Office, 6013 Lakeside Boulevard, Indianapolis, Indiana 46278-2933 or online at <http://www.in.nrcs.usda.gov/>. The standards may be viewed and copied at IDEM Office of Land Quality, 100 North Senate Avenue, Eleventh Floor, Indianapolis, Indiana.

(Water Pollution Control Board; [327 IAC 19-12-1](#))

### **[327 IAC 19-12-2](#) Site restrictions**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 2. (a) Waste management systems must not be constructed:

(1) except for subsection (b), in karst terrain based on information compiled by the department, and from karst and bedrock maps from the Indiana Geological Survey dated 1997;

(2) in a floodway;

(3) in a one hundred (100) year flood plain, unless all waste management system access is at least two (2) feet above the one hundred (100) year flood plain and structurally sound without lowering flood waters or the seasonal water table below the bottom of the waste management system;

(4) over mines; or

(5) in soil types that are expected to have a seasonal high water table, unless the water table is lowered to keep the water table below the bottom of the waste management system.

(b) The commissioner may approve a waste management system to be constructed in karst terrain based upon the following site-specific information submitted to the commissioner:

(1) Characterization of the seasonal water table and soil.

(2) Design and construction specifications that assure adequate structural integrity and environmental protection.

(3) For manure storage facilities that are earthen, in addition to [327 IAC 19-7-1\(c\)\(6\)](#), information from at least one (1) of the soil borings or test holes to the shallower of either:

(A) bedrock; or

(B) ten (10) feet below the lowest point of the proposed waste management system.

(4) Other information that the commissioner deems necessary to ensure protection of human health

and the environment.

(Water Pollution Control Board; [327 IAC 19-12-2](#))

### **[327 IAC 19-12-3](#) Setbacks**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 3. (a) For purposes of this section, waste management systems must use the largest setback that is applicable.

(b) Waste management systems must be located to maintain the minimum setback distances from the following features that are known and identifiable at the time an application is submitted for approval:

(1) One thousand (1,000) feet from a public water supply well or public water supply surface intake structure.

(2) Except for subsection (c), three hundred (300) feet from the following:

(A) Surface waters of the state.

(B) Drainage inlets, including water and sediment control basins.

(C) Sinkholes, as measured from the surficial opening or the lowest point of the feature.

(D) Off-site water wells.

(3) One hundred (100) feet from the following:

(A) On-site water wells.

(B) Property lines.

(C) Public roads.

(4) Four hundred (400) feet from existing off-site residential and public buildings.

(c) A manure storage facility that contains solids must be maintained to have a minimum setback of one hundred (100) feet from the features in subsection (b)(2).

(d) If one (1) of the features in subsection (b) is constructed within the specified setback distances to an existing waste management system, a new waste management system may be constructed to maintain the same setback between the existing waste management system and the feature, providing that the feature was:

(1) not under the control of the owner/operator of the CFO; and

(2) constructed after the application for original waste management system was submitted to the department.

(e) The owner/operator may obtain a reduced setback under [327 IAC 19-5](#) by demonstrating to the commissioner that a different compliance approach meets the performance standards in [327 IAC 19-3-1](#).

(f) The property line setback distances in this section may be waived in writing by the owner of the adjoining property.

(Water Pollution Control Board; [327 IAC 19-12-3](#))

### **[327 IAC 19-12-4](#) Storage capacity and design requirements**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 4. (a) An alternate design may be approved by the commissioner if it is shown to provide an equivalent amount of environmental protection.

(b) All waste management systems must be designed to not discharge to surface waters of the state. If a waste management system discharges or is designed to discharge, a NPDES CAFO permit under 40

CFR 122.23 is required.

(c) All manure storage facilities for the CFO must be designed, constructed, and maintained with a combined storage capacity of at least one hundred eighty (180) days storage for the following:

- (1) All materials entering the manure storage facility.
- (2) If applicable, the expected precipitation and runoff from a twenty-five (25) year, twenty-four (24) hour precipitation event that falls on the drainage area around the manure storage facility that contains liquid.

Calculations for manure excretion characteristics must be based on ASAE D384.2: Manure Production and Characteristics, March 2005, available from the American Society of Agricultural and Biological Engineers, 2950 Niles Road, St. Joseph, Michigan 49085-9659, or online at [http://evo31.ae.iastate.edu/ifafs/doc/pdf/ASAE\\_D384.2.pdf](http://evo31.ae.iastate.edu/ifafs/doc/pdf/ASAE_D384.2.pdf).

(d) All manure storage facilities must be constructed according to the Indiana NRCS Conservation Practice Standard Code 313: Waste Storage Facility, September 2005. Construction of all manure storage facilities must be certified upon completion by a registered professional engineer on a form provided by the department and kept in the operating record.

(e) In addition to subsection (d), all concrete manure storage facilities must be constructed according to the following design standards:

- (1) MWPS-36: Rectangular Concrete Manure Storages, 2005\*; or
- (2) TR-9: Circular Concrete Manure Tanks, March 1998\*.

All concrete structures must be constructed according to the Indiana NRCS Construction Specification, Concrete Construction, October 2005, available online at:

<http://www.in.nrcs.usda.gov/technical/engineering/ConsSpecifications/pdf/concconstr.pdf>

\*Available from MidWest Plan Service, 122 Davidson Hall, Iowa State University, Ames, Iowa 50011-3080.

(f) In addition to subsection (d), all earthen manure storage facilities must be constructed according to the Indiana NRCS Conservation Practice Standard Code 359: Waste Treatment Lagoon, September 2005.

(g) Manure storage facilities that contain solids may not be constructed in sand or gravel soils, Unified Soil Classification of Pt, GW, GP, GM, GC, SW, SP, SM, as described in ASTM D2488-09a Standard Practice for Description and Identification of Soils (Visual-Manual Procedure), available from ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, unless specially designed with an approved liner, in accordance with section 5 of this rule.

(h) Waste management systems not specifically listed in this section must be designed and constructed in accordance with the requirements of [IC 13-18-10-4\(b\)](#). The design must be submitted to the department for approval under subsection (a) before construction can commence.

(i) Pipelines must be constructed according to the Indiana NRCS Conservation Practice Standard Code 516: Pipeline, November 2009.

(j) Installation of underground steel storage tanks for manure is prohibited.

(k) Plastic and fiberglass tanks and aboveground steel tanks must comply with the following:

- (1) Tanks must have sufficient strength to withstand design loads.
- (2) All tanks must be watertight.
- (3) Tanks used to store other substances must be cleaned to remove any traces of other chemicals prior to addition of manure to the tank.
- (4) Tanks must be designed and installed to ensure the seasonal high water table is maintained below the tank or the tank must be anchored to prevent flotation.
- (5) Aboveground tanks must have protected shutoff valves for all inlet and outlet pipes.

(l) Vegetative management systems must be constructed according to the Indiana NRCS Conservation Practice Standard Code 635: Vegetated Treatment Area; October 2008.

(m) Constructed wetlands must be constructed according to the Indiana NRCS Conservation Practice Standard Code 656: Constructed Wetland; October 2006.

(n) Any drainage system to lower a seasonal water table around the base of a waste management system must be equipped with an access point for sampling within fifty (50) feet of the waste management system.

(o) Any drainage system to lower the seasonal water table around the base of a waste management system must be designed and installed to:

- (1) effectively collect and drain the ground water;
- (2) be of adequate size, proper slopes, and proper distance from the waste management system;
- (3) be provided with sumps, pumps (including a backup pump), and electricity supply, if applicable;
- (4) have an outlet that is at least fifty (50) feet away from the building, and at least:
  - (A) fifty (50) feet from the property line in soils with a permeability of one-half (1/2) inch per hour or less; or
  - (B) twenty (20) feet from the property line in soils with a permeability greater than one-half (1/2) inch per hour; and
- (5) have a shut-off valve or equivalent.

(p) Any field tiles or drainage outlets encountered during construction must be cut back at least fifty (50) feet from the edge of a berm or concrete pit or earthen structure and blocked or rerouted.

(q) The commissioner may incorporate conditions into the approval that require testing to verify that the manure storage facility is consistent with the design and performance standards established in this article.

(r) The owner/operator shall notify the commissioner in writing two (2) days prior to scheduled construction of a waste management system. If an owner/operator completes construction of an approved waste management system and wishes to utilize that portion prior to finishing construction of the entire facility, multiple notices shall be submitted.

(s) The applicant shall execute and send to the commissioner an affidavit, under penalty of perjury, that a waste management system was constructed, and shall be operated, in accordance with the requirements of the approval and this article. The owner/operator must submit to IDEM, on a form provided by the department, the affidavit within thirty (30) days after the date construction of an approved waste management structure is completed, and prior to the introduction of any animals or manure. The affidavit must be completed, notarized, and returned to IDEM assuring that the waste management system was constructed and shall be operated in accordance with the requirements of the approval. The affidavit must also include identification of what parts of the waste management system are completed at the time of submittal. If an owner/operator performs partial construction of an approved facility and wishes to utilize that portion prior to completing construction of the entire facility, multiple affidavits shall be submitted. No portion of a waste management system, including animal feed and similar feedstock storage areas, shall be utilized unless that portion, or a combination of the waste management system for that portion, is completely constructed prior to the introduction of animals and provides a minimum of one hundred eighty (180) days storage for manure, wastewater, and/or leachate.

(Water Pollution Control Board; [327 IAC 19-12-4](#))

#### **[327 IAC 19-12-5](#) Design requirements for liners**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)



**Sec. 5. (a)** The soil or foundation of a manure storage pond or manure treatment lagoon shall have a maximum specific discharge of  $1/16 \text{ in}^3/\text{in}^2/\text{day}$  ( $1.8 \times 10^{-6} \text{ cm}^3/\text{cm}^2/\text{sec}$ ). This requirement may be satisfied by soil testing that shows a minimum of three (3) feet of in situ soils that meet the maximum specific discharge criteria. The soil must be over-excavated a minimum of six (6) inches and recompacted to break up the existing macropore structure.

**(b)** If there is not at least three (3) feet of in situ soils that meet the maximum specific discharge criteria in subsection (a), a liner must be used. Except in subsection (c), liners used in manure storage facilities must meet the following design standards:

- (1)** Indiana NRCS Conservation Practice Standard Code 521A: Pond Sealing or Lining, Flexible Membrane, October 2006;
- (2)** Indiana NRCS Conservation Practice Standard Code 521B: Pond Sealing or Lining, Soil Dispersant, October 2006; or
- (3)** Indiana NRCS Conservation Practice Standard Code 521C: Pond Sealing or Lining, Bentonite Sealant, October 2006.

**(c)** Clay liners shall be a minimum of one (1) foot thick and have a maximum specific discharge of  $1/16 \text{ in}^3/\text{in}^2/\text{day}$  ( $1.8 \times 10^{-6} \text{ cm}^3/\text{cm}^2/\text{sec}$ ).

(Water Pollution Control Board; [327 IAC 19-12-5](#))

### **Rule 13. Manure Handling and Storage; Operational Requirements**

#### **[327 IAC 19-13-1](#) Maintenance requirements**

**Authority:** [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 1. (a)** All waste management systems and application equipment must be maintained and operated to meet the approval conditions.

**(b)** Management of liquid and solid manure must be in compliance with the following:

- (1)** This article.
- (2)** The CFO approval.
- (3)** All applicable state and federal laws.

**(c)** Manure at the production area must be stored in an approved waste management system until removed for land application in accordance with [327 IAC 19-14](#).

**(d)** If uncovered, liquid manure storage facilities must be maintained with a minimum freeboard of two (2) feet or as specified in the approval conditions.

**(e)** Uncovered liquid manure storage facilities must have clearly identified markers to indicate manure levels relative to the approved freeboard elevation.

**(f)** The owner/operator shall inspect all waste management systems for compliance with this article and the approval conditions and, if applicable, freeboard measures as specified in the approval, at least one (1) time each week. Completed self-monitoring records must be kept in the operating record.

**(g)** All earthen berms for manure storage facilities must be:

- (1)** stabilized with vegetation or alternative erosion control measures; and
- (2)** maintained to allow for visual inspection and prevent growth of trees and shrubs.

**(h)** An owner/operator with an approved vegetative management system must operate and maintain

the vegetative management system to provide effective treatment in accordance with the approval.

(i) Migration of solids from contaminated runoff from any feedlot is prohibited unless directed to an approved manure storage facility.

(j) Provisions shall be made for periodic removal of accumulated solids to preserve storage capacity. The anticipated method for doing this must be considered in planning, particularly in determining the configuration of ponds and type of liner, if any.

(Water Pollution Control Board; [327 IAC 19-13-1](#))

### **[327 IAC 19-13-2](#) Digesters and other energy recovery systems**

Authority: [IC 13-14-8-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14-12](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 2.** Any manure digester or energy recovery system located at a CFO or CAFO must obtain applicable registrations from the department's solid waste program.

(Water Pollution Control Board; [327 IAC 19-13-2](#))

### **[327 IAC 19-13-3](#) Transport and handling**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 3.** Pumping, dumping, or allowing the leakage or drainage of manure from a manure transfer vehicle onto unauthorized premises, public thoroughfares, or into waters of the state is prohibited.

(Water Pollution Control Board; [327 IAC 19-13-3](#))

### **[327 IAC 19-13-4](#) Emergency response plan**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 4. (a)** The owner/operator of a CFO shall develop an emergency response plan to be kept in the operating record. The plan shall contain the following:

(1) Procedures for the following:

(A) Containing a manure release to prevent it from reaching waters of the state.

(B) Locating the source of the manure release and stopping the flow of manure or waste liquids.

(C) Returning released manure or waste liquids to an approved waste management system.

(D) Land applying released manure in accordance with [327 IAC 19-14](#).

(E) Contacting the following:

(i) The owner/operator.

(ii) Any applicable local emergency or health authorities.

(2) The names and telephone numbers of persons who are identified by the owner/operator as responsible for implementing the emergency response plan.

(3) Areas where potential manure releases can occur and their accompanying drainage points.

(4) Identification of equipment and cleanup materials to be used in the event of a manure release.

**(b)** The owner/operator must implement the emergency response plan anytime a manure release occurs. If a manure release reaches waters of the state, the owner/operator must also comply with subsection (c).

(c) If a spill reaches waters of the state, the following procedures must be followed:

(1) As soon as possible, but within two (2) hours of discovery, communicate a spill report to the department of environmental management, office of land quality, emergency response section: (888) 233-7745 for in-state calls (toll free) or (317) 233-7745 for out-of-state calls. If new or updated spill report information becomes known that indicates a significant increase in the likelihood of damage to the waters of the state, the responsible party shall notify the department as soon as possible but within two (2) hours of the time the new or updated information becomes known.

(2) Submit to the Indiana Department of Environmental Management, Office of Land Quality, Emergency Response Section (MC 66-30), 2525 N. Shadeland Ave., Suite 100, Indianapolis, IN 46219-1787, a written copy of the spill report if requested in writing by the department.

(3) Except from modes of transportation other than pipelines, exercise due diligence and document attempts to notify the following:

(A) For manure releases or spills to surface water that cause damage, the nearest affected downstream water user located within ten (10) miles of the spill and in the state of Indiana.

(B) For manure releases or spills to soil outside the facility boundary, the affected property owner or owners, operator or operators, or occupant or occupants.

(Water Pollution Control Board; [327 IAC 19-13-4](#))

## Rule 14. Land Application of Manure

### [327 IAC 19-14-1](#) Applicability

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 1. Land application of manure, litter, or process wastewater to land that is:

(1) owned by the permittee;

(2) rented by the permittee; or

(3) utilized by the permittee under an agreement for land use;

shall be done in accordance with the requirements of this rule.

(Water Pollution Control Board; [327 IAC 19-14-1](#))

### [327 IAC 19-14-2](#) Required acreage for manure application

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10-1](#); [IC 13-30](#)

Sec. 2. (a) All CFOs must maintain a minimum number of acres for manure application based on manure application rates from section 3 of this rule. This must be:

(1) documented in the operating record at all times; and

(2) included in all applications required under [IC 13-18-10-1](#)(2).

(b) Any acreage utilized for the application of manure that is not owned by the owner of the CFO must be documented in the operating record via land use agreements as described in [327 IAC 19-9-1](#)(a)(17).

(c) If the applicant can demonstrate to the satisfaction of the commissioner that a smaller amount of acreage can be used and is equally protective of human health and the environment, the commissioner may approve the different amount of acreage based on site-specific criteria submitted with the application package, including:

(1) type of manure generated;

(2) alternate methods of managing manure;

(3) innovative technology;

(4) the marketing and distribution of manure as described in section 7 of this rule; or

(5) other criteria related to protection of human health or the environment.

(d) Copies of any written waivers related to reduction of the property line setback distances must be kept in the operating record.

(Water Pollution Control Board; [327 IAC 19-14-2](#))

### [327 IAC 19-14-3](#) Manure application rates

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18-10](#); [IC 13-30](#)

Sec. 3. (a) The owner/operator of a CFO shall have the results of a soil test prior to any land application events, as well as a manure test. Soil and manure tests shall be conducted in accordance with the manure management plan that is submitted to the commissioner to meet the requirement in [327 IAC 19-7-1\(c\)\(5\)](#).

(b) The application rate of nitrogen (N) must not exceed the N requirements based on the Purdue University Cooperative Extension Service publication ID-101: Animal Manure as a Plant Nutrient Resource, February 2001, available from the Cooperative Extension Service, Purdue University, West Lafayette, Indiana 47907, of current or planned crops of the upcoming growing season as documented in the operating record. Minimum N loss estimates must be used unless otherwise justified. This justification must be kept in the operating record.

(c) For the first manure application only, nutrient content of manure from facilities constructed after the effective date of this article shall be based on either:

(1) manure test values as described in [327 IAC 19-7-5\(d\)](#); or

(2) values in the NRCS Agricultural Waste Management Field Handbook (AWMFH) Chapter 4, April 1992, available from the Natural Resources Conservation Service, West National Technology Support Center, 1201 NE Lloyd Boulevard, Suite 1000, Portland, OR 97232 or online at <http://www.wsi.nrcs.usda.gov/products/w2q/awm/handbk.html> and applied at fifty percent (50%) of the rate listed in subsection (b).

For all subsequent manure application events, nutrient content values must be based on manure test values.

(d) As of the effective date of this article, the following must comply with the phosphorus application rates in Table 1:

(1) Large CAFOs, as defined in 40 CFR 122.23(b).

(2) CAFOs with a NPDES permit.

(3) CFOs approved for initial construction after the effective date of this article.

Table 1.

#### PHOSPHORUS APPLICATION RATES FOR LARGE CAFOS AND CFOS APPROVED FOR CONSTRUCTION AFTER THE EFFECTIVE DATE OF THIS ARTICLE

Soil test level (ppm)	Application rate
0-50	N based
51-100	1.5 × P crop removal
101-200	1.0 × P crop removal
201+	0

(e) Beginning with the effective date of this article, CFOs not listed in subsection (c) must comply with the phosphorus application rates in Table 2:

Table 2.

#### PHOSPHORUS APPLICATION RATES FOR ALL OTHER CFOS

Soil test level (ppm)	YEAR			
	1-2	3-4	5-6	7+
0-50	N based	N based	N based	N based



51-100	1.5 × P crop removal	1.5 × P crop removal	1.5 × P crop removal	1.5 × P crop removal
101-200	1.0 × P crop removal	1.0 × P crop removal	1.0 × P crop removal	1.0 × P crop removal
201-250	0.9 × P crop removal	0.75 × P crop removal	0.75 × P crop removal	0
251-275	0.9 × P crop removal	0.75 × P crop removal	0.5 × P crop removal	0
276-300	0.9 × P crop removal	0.75 × P crop removal	0.25 × P crop removal	0
301-350	0.7 × P crop removal	0.5 × P crop removal	0	0
351-400	0.7 × P crop removal	0.25 × P crop removal	0	0
401+	0	0	0	0

(f) The following information must be added to the operating record as needed in accordance with required time frames established in this article and [IC 13-18-10](#) and must be maintained and updated in the operating record:

- (1) Expected crop yields.
- (2) The date or dates manure, litter, or process wastewater is applied to each field.
- (3) Precipitation events at the time of application and for twenty-four (24) hours prior to and following application.
- (4) Test methods used to sample and analyze manure, litter, process wastewater, and soil.
- (5) Results from manure, litter, process wastewater, and soil sampling.
- (6) An explanation of the basis for determining manure, litter, and process wastewater application rates.
- (7) Calculations showing the manure nitrogen and phosphorus to be applied to each field.
- (8) Total amount of nitrogen and phosphorus actually applied to each field, including documentation of calculations for the total amount applied.
- (9) The method used to apply the manure, litter, or process wastewater.
- (10) The date or dates of manure, litter, and process wastewater application equipment inspection.
- (11) USDA soil survey maps of currently available land application sites.
- (12) The type of manure applied.
- (13) A written conservation plan with an explanation of conservation practices used must be completed and implemented prior to land application on highly erodible land, if required in section 4(j) of this rule. CAFOs with a NPDES permit must have a nutrient management plan prior to land application on highly erodible land.

(Water Pollution Control Board; [327 IAC 19-14-3](#))

#### [327 IAC 19-14-4](#) Manure application activities

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 4. (a) Manure that is staged at the manure application site for more than seventy-two (72) hours must be:**

- (1) covered or adequately bermed to prevent run-on or runoff;
- (2) applied to the site within ninety (90) days;
- (3) set back from property lines and public roads one hundred (100) feet; and
- (4) set back from residential buildings four hundred (400) feet.

**(b) Staging of manure at the manure application site is prohibited:**

- (1) within three hundred (300) feet of surface waters of the state, drainage inlets, including water and sediment control basins, or water wells unless there is a:
  - (A) barrier; or
  - (B) surface gradient that contains or directs any contaminated runoff away from the waters of the state, drainage inlets, including water and sediment control basins, or water wells;
- (2) on any area with a slope greater than six percent (6%), unless run-on and runoff is controlled; or
- (3) on any standing water, waterway, or flood plain.

(c) Solid manure, litter, or contaminated bedding may not be placed outside of any approved manure storage facility at the CFO overnight or during inclement weather.

(d) The application of manure is prohibited in the following conditions:

- (1) Saturated ground.
- (2) Manure applied from manure application equipment operating on a public road.

(e) For large CAFOs, as defined in 40 CFR 122.23(b), and CAFOs with a NPDES permit, surface application of manure, litter, or process wastewater to frozen or snow covered ground is prohibited, unless allowed under a NPDES permit obtained by the CAFO.

(f) CFOs not listed in subsection (e) may apply manure on frozen or snow covered ground only when there is an emergency as defined in subsection (g).

(g) For purposes of this section, an emergency application is only allowed when there is an immediate need to apply manure to comply with the manure storage requirement of [327 IAC 19-12-4](#) due to unforeseen circumstances affecting the storage of the liquid manure. The unforeseen circumstances must be beyond the control of the owner of the CFO, including, but not limited to, natural disaster, extreme weather conditions, or equipment or structural failure. The need to apply manure to maintain required storage capacity due to improper design or management of the manure storage facility, including, but not limited to, a failure to properly account for the volume of manure to be stored shall not be considered an emergency for purposes of this section.

(h) The following requirements apply to all emergency land application of liquid manure on frozen or snow covered ground:

- (1) The person must notify the appropriate department field office by telephone prior to the application.
- (2) The following information must be provided or the notification will not be considered complete:
  - (A) The CFO owner's name.
  - (B) The facility's name.
  - (C) The facility's ID number.
  - (D) The reason for emergency application.
  - (E) The date of the land application.
  - (F) The estimated number of gallons of manure to be applied.
  - (G) The location of the application fields.

The owner must document the emergency as well as actions taken to abate it and keep that information in the CFO's operating record.

(3) The manure must be applied in accordance with all land application requirements of this rule and, additionally, may only be applied on a field where the following conditions are met:

- (A) No application to land with a slope greater than two percent (2%), unless there is forty percent (40%) crop residue or vegetated crop cover on the land application site.
- (B) No application in a flood plain.
- (C) Application cannot be closer than two hundred (200) feet from any surface water.
- (D) The application rate for all farms can be no more than a total of fifty percent (50%) of the agronomic rate, based on Table 1 of section 3 of this rule.

(4) Once the emergency is abated, land application of manure must cease to frozen or snow covered ground.

(i) Subsections (f) through (h) do not apply to the application of liquid manure injected or incorporated into the soil on the same date.

(j) Liquid or solid manure must not be applied to highly erodible land unless:

- (1) the land has forty percent (40%) residue protection or crop cover; or
- (2) it is applied in accordance with a conservation plan described in section 3(f)(13) of this rule.

(k) Any manure application, except those described in subsection (l), that causes a water quality

**violation:**

- (1) is a violation of this article; and
- (2) may result in enforcement action.

**(l) Subsection (k) does not apply to organic or inorganic matter that consists of fertilizer material that:**

- (1) is contained in:**
  - (A) runoff from a storm event; or**
  - (B) irrigation return flow; and**
- (2) enters waters of Indiana as a result of land application of the fertilizer material that is:**
  - (A) for agricultural purposes;**
  - (B) done at appropriate agronomic rates for proper nutrient uptake in the field;**
  - (C) applied in accordance with this rule; and**
  - (D) documented.**

(Water Pollution Control Board; [327 IAC 19-14-4](#))

**[327 IAC 19-14-5](#) Spray irrigation**

**Authority:** [IC 13-13-5-1](#); [IC 13-15-1-2](#); [IC 13-15-2-1](#)

**Affected:** [IC 13-18-10](#)

**Sec. 5. (a) Spray irrigation of liquid manure and process wastewater must be conducted to prevent equipment leaks and excessive application. Application is deemed excessive when the application rate exceeds the infiltration rate of the soil where the application is occurring, expressed in inches per hour.**

**(b) Application must be conducted:**

- (1) under the constant supervision of a person; or**
- (2) with devices to detect pressure loss due to leaks and devices to shut down the system if leaks are detected.**

**(c) Manure and process wastewater must not be applied by spray irrigation to any land that has less than twenty (20) inches of soil above the bedrock.**

**(d) Spray irrigation in a flood plain is prohibited unless the following conditions are met:**

- (1) The setback from surface water is increased to two hundred (200) feet.**
- (2) Spraying is only done during months that the NRCS soil data mart indicates have a low potential for flooding.**
- (3) There is no expectation of flooding, based on:**
  - (A) available weather forecast information; and**
  - (B) rainfall or flood conditions upstream of the land application area.**
- (4) A spray irrigation plan is completed, which must be kept in the operating record and includes the following:**
  - (A) A map of the flood plain area.**
  - (B) A timeline of when the spraying will occur.**
  - (C) A description of the methods used in subsection (b).**

(Water Pollution Control Board; [327 IAC 19-14-5](#))

**[327 IAC 19-14-6](#) Manure application setbacks**

**Authority:** [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

**Affected:** [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 6. (a) Except as otherwise provided under this section, application of manure and process wastewater must be in accordance with the setbacks in Table A: Manure Application Setback Distances, from Indiana NRCS conservation practice standard 633: Waste Utilization, October 2007, as follows:**

- (1) All setback distances must be measured from the edge of the area of actual placement of manure or process wastewater on the land.
- (2) The property line setback distances in this subsection may be waived in writing by the owner of the adjoining property.
- (3) The setback is the width of the filter strip if a properly designed and maintained filter strip of at least fifty (50) feet in width is located between the application site and any of the following:
  - (A) Surface waters of the state.
  - (B) Any known private well.
  - (C) The surface opening or lowest point of any sinkhole.
  - (D) Any drainage inlet, including water and sediment control basins.
- (4) The setback is ten (10) feet if a gradient barrier is located between the application site and any of the following:
  - (A) Surface waters of the state.
  - (B) Any known well.
  - (C) The surface opening or lowest point of any sinkhole.
  - (D) Any drainage inlet, including water and sediment control basins.

(b) When planning land application, the owner/operator must take into account the:

- (1) weather forecast and likelihood of precipitation events for the twenty-four (24) hour period before and after the application; and
- (2) site soil conditions;

to assure that manure and process wastewater are not applied before, during, or immediately following a rain event that, when combined with soil conditions, would likely result in runoff.

(c) Land application sites must be inspected to identify any field tile outlets, grassed waterways, and surface water conveyance channels under or immediately bordering the land application site. Monitoring of identified field tile outlets, waterways, and surface water conveyance channels based on:

- (1) color;
- (2) flow;
- (3) volume and volume change; and
- (4) odor and change in odor;

must occur during and immediately following land application of the manure or process wastewater. If there is evidence of manure or process wastewater discharging from the field tile outlet, the land application must cease immediately and the flow stopped or captured. Any flow that is captured shall be either land applied or returned to an approved manure storage facility.

(d) The monitoring activities conducted in accordance with subsection (c) must be documented and placed in the operating record.

(Water Pollution Control Board; [327 IAC 19-14-6](#))

#### **[327 IAC 19-14-7](#) Marketing and distribution of manure**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 7. (a) The owner/operator of the CFO shall provide an information sheet to any person that receives or purchases more than ten (10) cubic yards of dry manure or four thousand (4,000) gallons of liquid manure in a year from the CFO unless the owner/operator takes responsibility for applying the manure.

(b) The information sheet must contain, at a minimum, the following information:

- (1) The name and address of the CFO providing the manure.
- (2) A statement indicating that it is unlawful to allow the manure to enter any waters of the state.
- (3) Information on the nutrient content of the manure.
- (4) The manure application requirements of this rule.

(c) The operating record must contain and be maintained and updated with records of any person who



receives or purchases more than ten (10) cubic yards of dry manure or four thousand (4,000) gallons of liquid manure in a year to include the following:

- (1) The name and address of the person receiving or purchasing the manure.
- (2) The amount of manure received or purchased by the person.
- (3) A copy of the information sheet.

(d) Anyone purchasing or receiving more than ten (10) cubic yards of dry manure or four thousand (4,000) gallons of liquid manure in a year must:

- (1) have a nutrient application certification; and
- (2) obtain all applicable certifications from the office of the state chemist.

(e) If a manure distribution program is used, IDEM may allow for a waiver of a facility's total land application acreage requirements if:

- (1) the documentation as described in subsections (b) and (c) from the previous three (3) years is submitted showing the operation has sold or distributed the manure produced at the facility; or
- (2) contracts for the entire approval term for marketing the manure produced at the facility are submitted to the department.

(f) In order to obtain the waiver described in subsection (e), the owner/operator of the CFO must submit a certification to the department, which must include the amount of manure:

- (1) produced by the facility;
- (2) marketed by the facility; and
- (3) that was land applied.

(g) All records in this section must be made available to a representative of the department during an inspection.

(Water Pollution Control Board; [327 IAC 19-14-7](#))

## **Rule 15. Decommissioning of Manure Storage Facilities**

### **[327 IAC 19-15-1](#) Applicability**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 1.** The owner/operator of a CFO subject to this article that plans to decommission a manure storage facility must comply with the requirements in section 2 of this rule. A manure storage facility is deemed decommissioned when the environmental threat has been removed.

(Water Pollution Control Board; [327 IAC 19-15-1](#))

### **[327 IAC 19-15-2](#) General requirements**

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

**Sec. 2. (a)** The owner/operator of a CFO that plans to decommission a manure storage facility shall do the following:

- (1) Decommission the manure storage facility in accordance with the requirements in this section prior to expiration of the approval.
- (2) Continue to maintain the manure storage facility in accordance with the requirements of this article until the manure is removed.
- (3) Have all the manure removed from the manure storage facility to the extent practical.
- (4) Have the manure:
  - (A) applied to the land in accordance with [327 IAC 19-14](#); or

(B) managed in accordance with this article and applicable state and federal laws.

(5) Follow the requirements in the Indiana NRCS Conservation Practice Standard Code 360, Closure of Waste Impoundments, October 2004, if applicable.

(6) Have all associated appurtenances and conveyance structures removed from uncovered manure storage facilities.

(7) Recalculate the storage capacity for the CFO.

(8) Notify the department:

(A) before demolishing or converting the use of any manure storage facility; and

(B) of the intended future use of the manure storage facility if the manure storage facility is to be converted to another use.

(b) The owner/operator shall submit a certification to the commissioner within thirty (30) days of completing the requirements in this section that states compliance with the requirements in this section.

(c) If deemed necessary to protect human health or the environment, the commissioner may require additional decommissioning activities based on:

(1) surface or ground water contamination;

(2) evidence of leakage, seepage, manure releases, or spills; or

(3) other criteria related to protection of human health or the environment.

The commissioner shall provide written documentation describing the basis for any required additional activities.

(Water Pollution Control Board; [327 IAC 19-15-2](#))

## Rule 16. Exiting the Confined Feeding Approval Program

### [327 IAC 19-16-1](#) Applicability

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 1. This rule applies to any CFO owner/operator that wants to be removed from the program due to a:

(1) reduction in the size of the CFO to a number of animals that is less than the definition of CFO in [327 IAC 19-2-7](#); or

(2) decision to cease operation and completely close the entire CFO.

(Water Pollution Control Board; [327 IAC 19-16-1](#))

### [327 IAC 19-16-2](#) Reduction in size of the operation

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 2. (a) A CFO may be removed from the regulated confined feeding approval program, but continue to operate as a smaller operation, if:

(1) the department has received a request from the owner/operator to be removed from the program and confirming that the CFO has and maintains fewer animals than the definition of CFOs in [327 IAC 19-2-7](#); and

(2) approved by the commissioner based on a review of the criteria in subsection (b).

(b) The commissioner shall review the following criteria in determining if a request to exit the confined feeding approval should be approved:

(1) The number of animals at the CFO.

(2) Past enforcement actions relative to any discharges and current compliance with any outstanding violations.

(3) Manure inventory.

(4) Appropriate decommissioning per the requirements in [327 IAC 19-15-2\(a\)](#) of any manure storage facilities that will no longer be used.

(5) Existence of any conditions that pose a threat to human health or the environment.

(c) The commissioner shall send the owner/operator a letter of confirmation when the department has verified that the requirements of subsection (a) have been met.

(d) For a CFO that has been removed from the CFO approval program under subsection (a), the owner/operator must submit a new application under this article to again operate a CFO as defined in [327 IAC 19-2-7](#).

(Water Pollution Control Board; [327 IAC 19-16-2](#))

### [327 IAC 19-16-3](#) Closing the operation

Authority: [IC 13-14-8-7](#); [IC 13-15-2-1](#); [IC 13-18-10-4](#)

Affected: [IC 13-11-2](#); [IC 13-14](#); [IC 13-15](#); [IC 13-18](#); [IC 13-30](#)

Sec. 3. (a) A CFO may be removed from the regulated confined feeding approval program and completely closed if the department has been notified that:

(1) all livestock animals are removed from the site; and

(2) the CFO decommissioned all manure storage facilities in accordance with [327 IAC 19-15-2](#), including the removal of all manure.

(b) A CFO will not be allowed to exit the CFO program until all manure generated during the time the CFO was regulated has been disposed of or land applied in accordance with this article.

(c) The commissioner shall send the owner/operator a letter of confirmation when the department has verified that the requirements of subsection (a) have been met.

(Water Pollution Control Board; [327 IAC 19-16-3](#))

SECTION 2. [327 IAC 16](#) IS REPEALED.

### [Notice of Public Hearing](#)

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